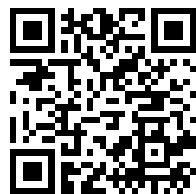


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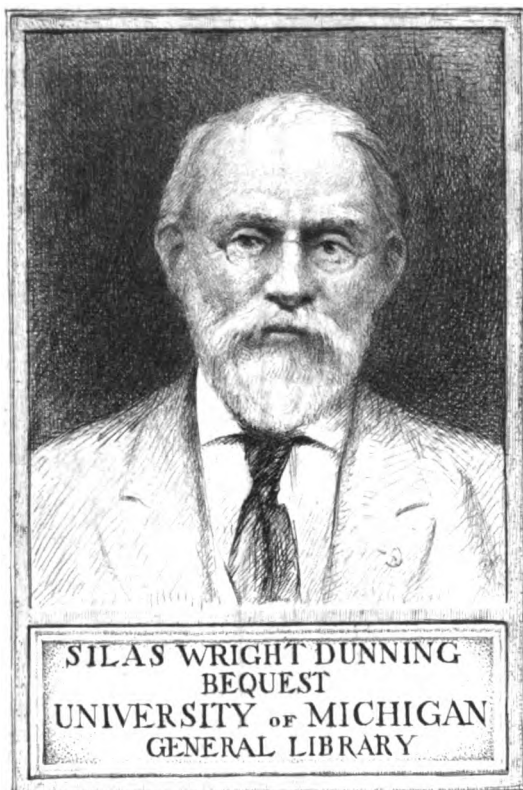
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- (6) Essays will be submitted for adjudication to Referees chosen by the Council. No medal will be awarded if the Council consider that the best essay is not of a sufficient standard of excellence.
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**Scouting.** Notes on Scouting. By J. M. BLAIR, The Black Watch. Second edition.  
As. 6.

**Military Law.** British. The Manual of Military Law, 1907, 'with' amendments.  
Rs. 2.

**Military Law.** India. Manual of Indian Military Law, 1911. Re. 1-8.

**War Establishments.** India, 1911. As. 9.

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**Physical Training.** Manual for the Indian Army, 1911. As. 6.

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**Cavalry.** Cavalry Training, 1907, reprinted with amendments. Re. 1.

**Cavalry Training.** Indian Supplement, General Staff, India, 1911. As. 5.

**Signalling.** Training Manual, Signalling, 1907. Reprinted with amendments.  
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**Training and Manœuvre Regulations,** 1909. As. 6.

**Training and Manœuvre Regulations.** Amendments, 1910. As. 2.

**Training and Manœuvre Regulations.** Indian Supplement, General Staff, India.  
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**Field Service Regulations.** Part I. Operations, 1909. Re. 1.

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**Musketry Regulations.** Part I, 1909. As. 8.

**Musketry Regulations.** Part II, 1910. As. 6.

**Musketry.** Indian Supplement, 1911. As. 5.

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JANUARY 1913.

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**Organization, Administration and Equipment for India.** By CAPT. WATSON SMYTH. 43 pp., with index, 12mo. 1911, Re 1.

Officers working for promotion examinations will find this small pamphlet useful. The author outlines some of the principles and main heads of organization and administration in India without obscuring them with details which are constantly liable to alteration; clearly stated references show the reader where to look in the various regulations for the details required.—*The Army Review*.

**Scouting.** Notes on Scouting. By J. M. BLAIR, The Black Watch. Second edition. As. 6.

**Military Law.** British. The Manual of Military Law, 1907, with amendments. Rs. 2.

**Military Law.** India. Manual of Indian Military Law, 1911. Re. 1-8.

**War Establishments.** India, 1911. As. 9.

**War Establishments.** Expeditionary Force, 1910-11. War Office. As. 10.

**Physical Training.** Manual for the Indian Army, 1911. As. 6.

**Engineering.** Manual of Field Engineering, 1911. War Office. As. 12.

**Sanitation.** Manual of Sanitation in its application to Military Life, 1907. As. 4.

**Cavalry.** Cavalry Training, 1907, reprinted with amendments. Re. 1.

**Cavalry Training.** Indian Supplement, General Staff, India, 1911. As. 5.

**Signalling.** Training Manual, Signalling, 1907. Reprinted with amendments. 1911. As. 8.

**Signalling.** Indian Supplement to Signalling, 1912. General Staff, India. As. 7.

**Training and Manœuvre Regulations,** 1909. As. 6.

**Training and Manœuvre Regulations.** Amendments, 1910. As. 2.

**Training and Manœuvre Regulations.** Indian Supplement, General Staff, India, 1911. As. 5.

**Infantry.** Infantry Training, 1911. War Office. Re. 1.

**Field Service Regulations.** Part I. Operations, 1909. Re. 1.

**Field Service Regulations.** Part II. Organization and Administration, 1909. Re. 1.

**Musketry Regulations.** Part I, 1909. As. 8.

**Musketry Regulations.** Part II, 1910. As. 6.

**Musketry.** Indian Supplement, 1911. As. 5.

**Musketry.** The N.-C. O's Musketry Small Book. A Pocket Reference on Musketry Knowledge, 1911. Re. 1.

**Army Regulations.** India, Volume II. Regulations and Orders for the Army, 1911. As. 14.

**Field Service Manuals, India :—**

Veterinary, 1908. As. 8.

Divisional and Cavalry Brigade Ammunition Columns, 1908. As. 4.

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JANUARY 1913.

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## II. GOLD MEDAL ESSAY COMPETITION, 1912-1913

The Council have selected the following as the subject for the Gold Medal Essay for 1912-13:—

"Examine the application of the main principles laid down in Field Service Regulations I, Chapter VII. The latter is to the contents of a campaign in a terrain similar to that of Balaclava and Alma against an enemy organized on modern principles."

## III. TACTICAL SCHEMES.

Twenty tactical schemes have been submitted by the Council of the Institute to the members of the following forces:—

Russian, German, and British. The latter are of the following types:—Three large attacking columns and a smaller column, a large column attacking the flank, and a large column attacking the front.

Two sets of schemes, attacking and retreating, are to be held, and a small set, and an entirely new series. Since VI is in process of preparation, it will be published before the next issue.

A number of the schemes submitted by the members of the Institute are to be sent under the name of the Secretary of the Society of Military History to the Council of the Institute.

## IV. MILITARY HISTORY PAPERS

In order to assist the members of the Society to study the history of the war, the Council have decided to publish a series of papers on the history of the war, and to publish a series of papers on the history of the war.

a) The history of the war, from the War of 1870-71.

b) The history of the war, from the War of 1870-71.

c) The history of the war, from the War of 1870-71.

d) The history of the war, from the War of 1870-71.

e) The history of the war, from the War of 1870-71.

The Council have decided to publish a series of papers on the history of the war, and to publish a series of papers on the history of the war.

A number of the papers submitted by the members of the Institute are to be sent under the name of the Secretary of the Society of Military History to the Council of the Institute.

## V. LIBRARY CATALOGUE

The Council have decided to publish a series of papers on the history of the war, and to publish a series of papers on the history of the war.

Five of the papers submitted by the members of the Institute are to be sent under the name of the Secretary of the Society of Military History to the Council of the Institute.

## VI. INTELLIGENCE ESSAY COMPETITION.

The Council have decided to publish a series of papers on the history of the war, and to publish a series of papers on the history of the war.

# THE JOURNAL

OF THE

## United Service Institution of India.

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Vol. XLII.

January 1913.

No. 190.

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### THE ARMIES OF FRANCE AND GERMANY.

By Capt. W. L. O. Twiss, 9th Gurkha Rifles,

on 23rd July 1912.

Major-General F. J. Aylmer, V.C., C.B., in the chair.

THE CHAIRMAN: Your Excellency, Ladies and Gentlemen,—Captain Twiss has very kindly consented to give us a lecture, the subject being a comparison between the French and the German armies. I am sure Captain Twiss will forgive me if I mention that whatever he says in his lecture is only his personal opinion. If during the lecture he should rashly declare war against France or Germany, it is really only to show us what might happen in such horrible circumstances. I have it on the highest authority in the last couple of days for saying that our relations with Germany at the present moment are on the most friendly basis; they have never been better. We all know that our relations with France are of the best.

THE LECTURER: Your Excellency, Mr. Chairman, Ladies and Gentlemen,—This is a subject on which volumes could be written without exhausting all the matter available, and it has been a task of considerable difficulty to compress the lecture within the space of one hour, whilst omitting no points of essential interest. My excuse for making the attempt is that the question of the relative value of the two armies is of the utmost importance to us at the present time, and that in the past four years I have enjoyed exceptional opportunities of studying the organization, tactical methods, and general efficiency of these armies. Since the beginning of 1908 I have been engaged continuously in this work, and during this period I have attended foreign manœuvres six times in an

official capacity—three times in France, twice in Germany, and once in Austria. On each of these occasions I was treated with the utmost kindness and hospitality, and I look back upon my visits to these foreign armies as among the most pleasant and instructive episodes in my life. It is inevitable that, in the course of my lecture, I should make certain criticisms on the French and German armies, and their methods; without them, my lecture would be colourless and of no value whatever. But I hope that it will be understood that such criticisms are in no way due to any hostile feeling against either the French or Germans, nor that I wish to depreciate the value and military efficiency of these magnificent armies, for which I have the highest respect and admiration, whilst numbering many of their officers among my best and most valued friends.

I will attempt to draw a comparison between the French and German armies on a number of the most important points and will conclude with a short summary and discussion as to their relative chances of victory in the event of a Franco-German war.

#### NUMBERS.

- (a) *Total German numbers*.—Approximately 4,500,000 trained men, of whom some  $3\frac{1}{2}$  millions are between the ages of 21 and 38.

In addition, some 6,000,000 untrained or partially trained men available for service on mobilization, making a grand total of 10½ millions.

- (b) *Total French numbers*.—Approximately 3,800,000 trained men of whom some  $5\frac{1}{4}$  millions are between the ages of 21 and 39.

The French population is under 40 millions and is practically stationary, that of Germany is 65 millions, and is increasing rapidly, at the rate of nearly a million a year.

Clearly, therefore, Germany has an enormous advantage in this respect. In France practically every man has to be taken, the Germans can afford to pick and choose, and only a comparatively small proportion of the total numbers available are called upon to join the colours each year.

It follows that the average physique of the German soldier is decidedly superior to that of the Frenchman and there are undoubtedly a large number of men serving in the ranks of the French army who would not be accepted by the German authorities. On the other hand, the French people are really and entirely a "nation in arms," whilst this is hardly the case in Germany, where the exemptions are so numerous.

The German army at present consists of 2½ army corps, but under the terms of the new Army Bill, which comes into force in October 1912, this number will be increased to 25, in view of the ample supply of men available there is no reason to suppose that this is the limit of German expansion in this respect.

The French have 21 army corps, including one in Algeria, and a colonial army corps, the headquarters of the latter being in France. In 1870 Algerian troops were used with good results and there is every reason to suppose that a similar course would be adopted in the next great war. The employment of black troops is by no means impossible, as the Senegalese tirailleurs are brave soldiers of proved value; at some future date Morocco may furnish a contingent to aid the French, but this will be a matter of time.

On mobilization, Germany could probably put into the field some 120—130 divisions, and France approximately 90—100. The British expeditionary force, be it noted, consists of 6 divisions.

#### TERMS OF SERVICE.

Compulsory service exists, of course, both in France and in Germany, in each case having been introduced as the result of a national disaster. In Prussia it was the result of Jena in 1806, in Austria and the South German States of the war of 1866, whilst true universal service was adopted in France after the débâcle of 1870-71. In discussing the question of compulsory service for Great Britain, a distinguished officer of the German General Staff once said to me, "You English will never adopt universal service; other great nations have only done so as the result of a national disaster, and for you that will be too late."

In the German army the terms of service are as follows :—

(a) *Service in the Active Army.*—Two years for the dismounted branches, *e.g.*, infantry, field and foot artillery, etc.; three years for the cavalry and horse artillery.

*Service in the Active Army Reserve.*—Five years for the dismounted branches; four years for cavalry and horse artillery.

The total service in the active army and its reserve is therefore seven years.

There are two periods of training, not to exceed eight weeks each, during the period with the active army reserve.

(b) *Landwehr Service.*—1st ban., 5 years for the dismounted branches; three years for cavalry and horse artillery.  
2nd ban., 6 years for the dismounted branches; 8 years for cavalry and horse artillery.

The total service in the landwehr is therefore 11 years.

There are two periods of training, not to exceed 14 days each, during the service in the 1st ban. of the landwehr.

As German recruits are taken at the age of 20 or 21, and the service in the active army, its reserve, and the landwehr lasts for 18 years, it follows that they are 38 or 39 years of age on the completion of these periods of service.

(c) *Landsturm Service.*—For trained men, up to the age of 45, *i.e.*, from 38 or 39 to 45. For untrained men, all of whom, from 17 to 45, are liable for service on mobilization.



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## II. GOLD MEDAL ESSAY COMPETITION, 1912-1913

The Council have selected the following as the subject for the Gold Medal Essay for 1912-13 : -

"Examine the application of the main principles laid down in Field Service Regulations I, Chapter VII (The Battle), to the conditions of a campaign in a terrain similar to that of Baluchistan and Afghanistan, against an army organized on modern principles."

## III. TACTICAL SCHEMES.

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Two sets of schemes (10 schemes in each series), revised to 1912, are now available, and an entirely new series (Series VI) is in process of preparation, of which eight problems are ready for issue.

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## V. LIBRARY CATALOGUE.

The library catalogue revised up to 1st November 1912 is now ready. Members requiring a copy should kindly inform the Secretary.

Price of catalogue Re. 1, or Re 1-4-0 by V.-P.P.

## VI. INTELLIGENCE ESSAY COMPETITION.

With reference to paragraph 12 of these notes, dated October 1912, the Executive Committee have decided not to publish any of the Intelligence essays for the present.

# THE JOURNAL

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### THE ARMIES OF FRANCE AND GERMANY.

By Capt. W. L. O. Twiss, 9th Gurkha Rifles,

on 23rd July 1912.

Major-General F. J. Aylmer, V.C., C.B., in the chair.

**THE CHAIRMAN:** Your Excellency, Ladies and Gentlemen,—Captain Twiss has very kindly consented to give us a lecture, the subject being a comparison between the French and the German armies. I am sure Captain Twiss will forgive me if I mention that whatever he says in his lecture is only his personal opinion. If during the lecture he should rashly declare war against France or Germany, it is really only to show us what might happen in such horrible circumstances. I have it on the highest authority in the last couple of days for saying that our relations with Germany at the present moment are on the most friendly basis; they have never been better. We all know that our relations with France are of the best.

**THE LECTURER:** Your Excellency, Mr. Chairman, Ladies and Gentlemen,—This is a subject on which volumes could be written without exhausting all the matter available, and it has been a task of considerable difficulty to compress the lecture within the space of one hour, whilst omitting no points of essential interest. My excuse for making the attempt is that the question of the relative value of the two armies is of the utmost importance to us at the present time, and that in the past four years I have enjoyed exceptional opportunities of studying the organization, tactical methods, and general efficiency of these armies. Since the beginning of 1908 I have been engaged continuously in this work, and during this period I have attended foreign manœuvres six times in an

official capacity—three times in France, twice in Germany, and once in Austria. On each of these occasions I was treated with the utmost kindness and hospitality, and I look back upon my visits to these foreign armies as among the most pleasant and instructive episodes in my life. It is inevitable that, in the course of my lecture, I should make certain criticisms on the French and German armies, and their methods; without them, my lecture would be colourless and of no value whatever. But I hope that it will be understood that such criticisms are in no way due to any hostile feeling against either the French or Germans, nor that I wish to depreciate the value and military efficiency of these magnificent armies, for which I have the highest respect and admiration, whilst numbering many of their officers among my best and most valued friends.

I will attempt to draw a comparison between the French and German armies on a number of the most important points and will conclude with a short summary and discussion as to their relative chances of victory in the event of a Franco-German war.

#### NUMBERS.

- (a) *Total German numbers.*—Approximately 4,500,000 trained men, of whom some  $3\frac{1}{2}$  millions are between the ages of 21 and 38.

In addition, some 6,000,000 untrained or partially trained men available for service on mobilization, making a grand total of  $10\frac{1}{2}$  millions.

- (b) *Total French numbers.*—Approximately 3,800,000 trained men, of whom some  $3\frac{1}{4}$  millions are between the ages of 21 and 39.

The French population is under 40 millions, and is practically stationary; that of Germany is 65 millions, and is increasing rapidly, at the rate of nearly a million a year.

Clearly, therefore, Germany has an enormous advantage in this respect. In France practically every man has to be taken; the Germans can afford to pick and choose, and only a comparatively small proportion of the total numbers available are called upon to join the colours each year.

It follows that the average physique of the German soldier is decidedly superior to that of the Frenchman, and there are undoubtedly a large number of men serving in the ranks of the French army who would not be accepted by the German authorities. On the other hand, the French people are really and entirely a "nation in arms," whilst this is hardly the case in Germany, where the exemptions are so numerous.

The German army at present consists of 23 army corps, but under the terms of the new Army Bill, which comes into force in October 1912, this number will be increased to 25; in view of the ample supply of men available there is no reason to suppose that this is the limit of German expansion in this respect.

The French have 21 army corps, including one in Algeria, and a colonial army corps, the headquarters of the latter being in France. In 1870 Algerian troops were used with good results and there is every reason to suppose that a similar course would be adopted in the next great war. The employment of black troops is by no means impossible, as the Senegalese tirailleurs are brave soldiers of proved value; at some future date Morocco may furnish a contingent to aid the French, but this will be a matter of time.

On mobilization, Germany could probably put into the field some 120—130 divisions, and France approximately 90—100. The British expeditionary force, be it noted, consists of 6 divisions.

#### TERMS OF SERVICE.

Compulsory service exists, of course, both in France and in Germany, in each case having been introduced as the result of a national disaster. In Prussia it was the result of Jena in 1806, in Austria and the South German States of the war of 1866, whilst true universal service was adopted in France after the débâcle of 1870-71. In discussing the question of compulsory service for Great Britain, a distinguished officer of the German General Staff once said to me, "You English will never adopt universal service; other great nations have only done so as the result of a national disaster, and for you that will be too late."

In the German army the terms of service are as follows:—

(a) *Service in the Active Army.*—Two years for the dismounted branches, *e.g.*, infantry, field and foot artillery, etc.; three years for the cavalry and horse artillery.

*Service in the Active Army Reserve.*—Five years for the dismounted branches; four years for cavalry and horse artillery.

The total service in the active army and its reserve is therefore seven years.

There are two periods of training, not to exceed eight weeks each, during the period with the active army reserve.

(b) *Landwehr Service.*—1st ban., 5 years for the dismounted branches; three years for cavalry and horse artillery. 2nd ban., 6 years for the dismounted branches; 8 years for cavalry and horse artillery.

The total service in the landwehr is therefore 11 years.

There are two periods of training, not to exceed 14 days each, during the service in the 1st ban. of the landwehr.

As German recruits are taken at the age of 20 or 21, and the service in the active army, its reserve, and the landwehr lasts for 18 years, it follows that they are 38 or 39 years of age on the completion of these periods of service.

(c) *Landsturm Service.*—For trained men, up to the age of 45, *i.e.*, from 38 or 39 to 45. For untrained men, all of whom, from 17 to 45, are liable for service on mobilization.

*One year Volunteers.*—In the German army youths up to a certain high educational standard, who engage to feed, clothe, and equip themselves during their periods of service, only serve for one year in the active army and are then passed on to the reserve. About 12,000 to 15,000 of this class join the ranks each year; in order not to interfere with their civilian professions, they may choose their own time for service between the ages of 18 and 23. This is a most important class in the German army, as a large proportion of the reserve officers and non-commissioned officers are obtained from it.

In the French army all men physically fit, whatever their class and education, serve from the age of 20 to 45. Periods of service are as follows :—

Active Army	...	...	2 years.
Reserve of the Active Army	..	...	11 "
Territorial Army	...	...	6 "
Reserve of the Territorial Army	...	...	6 "

During service with the reserve of the active army, there are two periods of training of 23 and 17 days respectively. The men of the territorial army are subject to one period of training of 9 days.

The French army, being a democratic institution, gives no privileges to the educated classes. All men have to serve two years in the ranks, unless promoted to reserve officer during that time. In a sense this is a disadvantage, as it is hard for gentlemen to live so long with the lower classes; on the other hand, it is an incentive to work and gain speedy promotion to reserve officer.

The main differences between the terms of service of the two armies are therefore :—

- (a) The training of the mounted troops lasts for three years in Germany as against only two in France.

In this respect the Germans undoubtedly have a considerable advantage. It is difficult to train cavalry to efficiency in horsemanship, in shock action, and in dismounted tactics in two years. The French undoubtedly make excellent use of their time, and work extraordinarily hard. But the Germans are also hard workers, both officers and men, and the advantage of an additional year is enormous. The training of French troop horses suffers to some extent by the want of good third-year riders to train them.

- (b) German reservists are liable to longer periods of training than the French.

As a matter of fact, this is an advantage which exists mainly on paper. Partly owing to financial reasons, and partly owing to a disinclination to interfere with the men's civilian professions, German reservists are seldom called out for the full periods of training to which they are liable.

#### ORGANIZATION AND MOBILIZATION.

Both in France and in Germany, the organization is territorial, except for the frontier army corps, the German guard corps, and the French colonial and Algerian army corps. The great advantage

of this territorial system is of course that it provides excellent facilities for mobilization. Mobilization has attained a high standard of efficiency in both countries, and it may be assumed that both are approximately equal in this respect. If anything the Germans must be held to possess a slight advantage, as the French have to bring troops over from North Africa. The German system of the Kaiser as supreme War Lord and his independence of Parliamentary control may result in a gain of time for Germany.

The railway systems of both countries are complete and efficient, although here again it is possible that the methodical thoroughness of the Germans may secure for them a slight superiority. A number of important German strategical railways lead towards the Belgian frontier between Aix-la-Chapelle (Aachen) and Trèves (Trier), and the military sidings all along this frontier are large and numerous. A great deal of activity in railway construction is being manifested in the region between Cologne—Aix-la-Chapelle—Trèves—Coblenz, which is poor and sparsely populated; these railways could never pay commercially, and there can be no doubt whatever that their object is to enable German troops to pour through Belgium in the event of war with France. The interest taken by the German military authorities in this region is shown by the fact that a staff ride on a very extensive scale has recently (June) been carried out there, and that the Imperial manœuvres are to be held there next year (1913).

Decentralisation is greater in Germany than in France. The German General Staff and army corps commanders have great power and independence, a decided advantage. Each German army corps commander administers the whole of the services of his army corps through his staff; he submits his own estimates and is responsible for the proper expenditure of the money allotted to him. He has practically a free hand as to minor buildings, repairs, and stores, and is responsible to the Kaiser direct for the discipline, training, efficiency, and preparedness for war of all the troops under his command. In France army corps commanders have not as extensive powers, although the French system has become more decentralised in the last few years.

Lastly, the Kaiser is a soldier himself, and the German Army is entirely controlled by real military experts; in France the Minister of War is occasionally a soldier, but usually a civilian, and the army is under the control of civilians. It is idle to discuss which of these two systems is the more likely to conduce to efficiency.

#### SYSTEM OF TRAINING.

The great principle of training, both in France and in Germany, is that every unit must be ready for mobilization by the early spring. Recruits join on October 1st, and are drilled and exercised with feverish haste throughout the winter in order to get them fit to enter the ranks by March. This involves a great deal of hard work for all ranks.



The German system of training is by far the more rigid of the two. The foundation of their training is good drill and stern discipline.

The French believe in elasticity and development of initiative, and their discipline is not nearly as stern as that of the German army.

The German system *inclines* to driving.

The French system *inclines* to leading.

It is difficult to say which is the better system. We must assume that the French and Germans know their own business, and have selected the methods which are best suited to the national characteristics of their soldiers. The German system would be intolerable to the French, whilst it suits the more tractable and docile nature of the Germans. When things are not going well, one would be inclined to back the army with the strictest discipline.

#### INFANTRY.

Both are fine and efficient, in quite different ways. They are trained to fight against each other, in such a way as to make the best possible use of their national characteristics. The German infantryman is stolid and heavy, but by no means lacks dash and energy. The Frenchman is more alert and enterprising, but also more impulsive and excitable.

##### General.

Soon after last year's German Imperial Manœuvres the Military Correspondent of the *Times* published a series of letters on the German army. These letters were able and extremely interesting, but certain of the criticisms appeared to me to be exaggerated and unfair. His verdict on the German infantry, for instance, is by no means in agreement with the opinion I have formed as a result of a considerable experience of German troops. Strict as German discipline is, it does not turn German soldiers into mere machines; I have always found them keen and interested in the operations, constantly studying maps and newspapers, and discussing the progress of the manœuvres.

##### Tactics.

Both are trained for fighting in large masses, solely for European warfare.

The Germans favour the use of successive lines in the attack, usually with considerable depth. Three or four years ago extensions were very slight, rarely more than two or three paces; now they are often four or five, and sometimes six paces, and the general appearance of an attack, at all events in the early stages, is rather like that commonly seen at British manœuvres. The attack is, however, rather wooden and mechanical. There is little doubling forward and cover is not utilised as well as by our own troops. Covering fire is rather neglected. There appears to be too much desire for regularity and good alignment, not enough dash and initiative. Supports and reserves are often seen in vulnerable formations, at ranges of 2,000 yards and upwards.

A French attack is very different to a German one. There appears to be little cohesion; there are wide gaps between various portions of the firing line; the formations are all different in the early stages—squad and sections dotted about, utilising cover, and commanders of units seeming to go as they please. In the preliminary stages the troops usually advance in small columns of sections or squads—the advance by *petits paquets*, as the French call it. British officers witnessing a French attack for the first time are often inclined to describe French methods as too irregular, lacking in cohesion, and tending to hopeless confusion. This is, however, far from being my own opinion, nor is it that of experienced British officers: one of the latter, who was thoroughly acquainted with French tactics, compared their methods to those of a well-trained football team, combining well, and with perfect understanding, but adopting no fixed rules or regular system.

German infantry certainly lack fire, as compared with the French, but in spite of this a German attack is an impressive thing. There is the evident determination of all ranks to press on and close with the enemy, perfect discipline, complete confidence, and good fire discipline.

Both French and Germans are thoroughly imbued with the offensive spirit, and hate acting on the defensive. Great stress is laid on *moral*.

German discipline is better, whilst French infantry have more intelligence and individuality. Both are rather inclined to underrate the effect of modern rifle fire. Both are well trained in bayonet fighting: they thoroughly believe in the bayonet, and realise that they must rely on the assault and charge for final victory.

I have never seen any entrenching done on manœuvres by attacking infantry.

Germans are probably steadier than the French, as the latter are inclined to be excitable. Fire discipline is good in both armies, but more

**Musketry.** strict and rather better in the German army. As a large proportion of the men in both armies belong to rifle clubs before they join, and after they leave the active army, it may be assumed that the general standard of marksmanship is fairly high. Neither in France nor in Germany are range-finders held in high esteem; in both armies mekometers and 2-men range-finders are looked upon as relics of antiquity, and only 1-man instruments are used: although these are fairly accurate, officers prefer to trust to their own powers of judging distance. There is little firing by infantry in either army over 1,000 metres, and judging distance is practised a great deal up to this distance.

The trajectory of both French and German rifles is low—lower than that of our own weapon. The German rifle is excellent, and its ammunition is superior, both in having an extremely flat trajectory at short ranges, and also because the bullet has a most deadly effect, almost like that of an expanding bullet. The

trajectory of the French "D" bullet is flat, and the fixed sight may be used up to 600 metres against infantry and up to 800 metres against cavalry.

Judging from my own experiences and those of other British officers, and taking the armament of the two armies into consideration, I should incline to the opinion that German rifle shooting in the field is likely to be superior to that of the French infantry.

Both Germans and French are excellent marchers, in their different styles, and their march discipline is practically perfect.

#### Marching.

I have had considerable experience of the marching powers of German infantry, both in North China at the time of the Boxer rising in 1900-01, and on manœuvres in recent years. There can be no doubt that the Military Correspondent of the *Times* was at fault in his criticisms on this point. Large bodies of troops, to the strength of a division at all events, march from 25—30 miles on manœuvres in a day, besides fighting for several hours. I have known a Bavarian division to march for nearly 40 kilometres (25 miles) and then to fight for three hours, whilst after the fighting was over, part of the troops had to march 5 or 6 miles to reach their billets: they started at 2 A.M., were engaged from 1 to 4 P.M., and some of the troops did not get into their quarters until 7 P.M. As far as I could see there were no stragglers.

If anything, the French are even better marchers than the Germans. They are certainly faster, although the Germans claim more endurance and stamina for their own men. In 1910 a division marched 48 miles in two days at the Grand Manœuvres. During the fighting in Morocco in 1908 a small column marched 42 miles in 22 hours, during 8 of which a fight was in progress; another column marched 37 miles in 19 hours, including a 2-hours' halt, the capture of a hostile camp, and a long running fight: all this on country roads or across country, and under a hot sun. I have often, when attached to Chasseurs Alpains on manœuvres, seen these magnificent troops and the Chasseurs à pied ending up a long day by marching the last couple of miles into billets at over 4 miles per hour.

March discipline is excellent in both armies. Troops either march in fours on one side of the road, leaving the other side clear, or they march one rank on each side, leaving the centre clear for traffic. Little water is drunk on the march. In Germany there is a lot of singing on the march; this is "by order" at first, but the men soon get to like it—it is wonderful how Germans like a thing when they are told to do so—and the singing is really good and inspiring. French soldiers do little singing but they are very cheery as a rule and are always "ragging" each other and cracking jokes, mostly improper.

Infantry scouting and reconnaissance are indifferent in both armies, reliance being placed in the mounted troops for all reconnaissance work.

When on the march, both French and Germans invariably billet or bivouac in depth; without this system their long marches would not be possible. Up to comparatively recent years a British division was supposed to be incapable of more than  $12\frac{1}{2}$  miles in a day—partly at any rate because the entire division had encamped together.

### CAVALRY.

The Germans have 103 regiments to the French 89, of the latter of which 10 are in Algeria. This slight numerical superiority will be partly counteracted by the addition of cyclist groups to French cavalry\* divisions, a measure likely to be introduced shortly.

Hitherto the German cavalry has not been organized in divisions. It is now intended to form 12 divisions, each to consist of 6 regiments, *i.e.*, 24 squadrons. The French have had 8 cavalry divisions for some time, and now this number is to be increased to 10, each of 6 regiments and 24 squadrons, like the German cavalry; this addition will only entail an increase of 2 regiments, as the corps cavalry is to be reduced to 1 regiment per army corps. A cyclist group, 320 strong, is to be attached to each division, these cyclist groups being formed from 17 companies of Chasseurs à pied.

The Germans are more inclined to the use of dismounted fire action than the French. Both manœuvre well in large bodies: the French may at present have some slight advantage in this respect owing to their organization in divisions during time of peace. On the other hand, it must not be forgotten that the German cavalry have the great advantage of three years' service as against the French two years. Last year's big French manœuvres were abandoned, with the result that there was no opportunity of seeing whether they now intend to devote more attention to fire tactics. In 1910 dismounted action was practically entirely neglected.

The proposed introduction of lances for all French cavalry belonging to divisions points to a firm and continued belief in shock tactics. In Germany the lance is the weapon for shock action.

In both armies vigorous and energetic methods are advocated, and the great maxim is that "cavalry is made for action, and that everything is excusable save inaction, which is unpardonable in a cavalry leader."

Reconnaissance work is rather better in Germany than in France; the reports sent in by cavalry patrols are full and complete, but are often obtained as the result of reckless exposure at close ranges.

As stated by the *Times*' Military Correspondent, the German system of holding the lances of dismounted men interferes seriously with the mobility of their cavalry.

The German method of delivering messages is very good. The bearer of a message for an officer gallops along shouting the officer's

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\* Now an accomplished fact.

name, even if passing high officials, and is then told where the required officer is to be found. This saves much time, and is better than our system, when orderlies appear to be afraid to raise their voices and shout for the person they want. In both armies, more especially in the German army, all ranks are very good at delivering verbal messages and practise this a great deal.

Both the French and German cavalry are thoroughly well mounted, and the training of their horses is excellent; in my opinion, and in that of officers more competent than myself to form a judgment, both French and German horses, especially the latter, are superior to those of our own cavalry in quality, stamina, and particularly in training. Very few horses of under six are ever used on manœuvres, and on mobilization practically all the horses taken out at first would be over six. As regards the training of horses, of course the Germans have a great advantage owing to their longer term of service, which enables the horses to be trained by the best riders among the third-year men.

Both French and Germans ride efficiently; the Frenchman is a finer natural horseman than the German and, in spite of his shorter period of service, looks better on a horse. The horsemastership of both is good, and officers work very hard in both armies; many of them would like to play polo and hunt, but have neither sufficient time nor money they consider that polo and hunting, useful and excellent training though they undoubtedly be, are greatly overdone by British cavalry officers and that the latter are in too many cases inclined to put sport and amusement in the foreground, and their profession in the background.

The system of registering horses and arranging for the requirements on mobilization is very good and complete in both countries. As the use of mechanical transport for the *train* will greatly lessen the amount of horseflesh to be provided, there seems to be little doubt that both France and Germany will be in a position to meet requirements for any but the most protracted war, although there may be some difficulty in procuring an adequate number of saddle horses to replace wastage.

#### ARTILLERY.

Numerically the Germans are superior to the French. A German army corps has 160 guns, *viz.*, usually 21 batteries (6 guns each) of field guns and 3 of light field 4·14-inch howitzers (6 guns each), and 4 batteries of 5·9-inch heavy howitzers (4 guns each). The field artillery is divided up amongst the divisions, each having 72 guns, whilst the 16 heavy howitzers are corps troops. A French army corps has 120 guns only, *i.e.*, 30 batteries of field guns (4 guns each); on the outbreak of war, batteries of heavy howitzers will be attached to each army.

Both employ indirect fire at the commencement of an action, although the Germans preferred direct fire positions or merely crest cover until 1911:

**Tactics.**

new regulations were introduced in 1910, as a result of which a great change took place in German methods. Both believe that the main object of artillery is to enable their own infantry to gain the victory; both are likely to come out into the open in the final stages of a battle in order to use direct fire; the co-operation of both with their infantry is excellent. The French practice is to tell off some of their batteries as infantry batteries, under the orders of infantry commanders: some, called counter-batteries, to deal with the hostile artillery; and a few in reserve, to put in where necessary. This is generally known as the Percin doctrine, and was tried for the first time on a large scale at the Grand Manœuvres of 1910, when General Percin was Umpire-in-Chief.

The French gun is at present the best in existence, and is decidedly superior to the German. French methods are very good and rapid, and the keynote of their artillery tactics is simplicity and rapidity of action. They have been in possession of a quick-firing gun for a longer time than any other army, and their experience has led them to discard all complications. They argue that complex methods may give good results at a practice camp, but are not suitable for a field of battle, where time is of primary importance. They do not believe in fire at long ranges as a general rule but are of opinion that the normal fighting ranges in European warfare will be from 2,000 to 4,000 yards; they only fire at long ranges in exceptional circumstances or at specially favourable targets. They do not rely on mechanical methods of finding the range or laying out angles of fire, at all events at short ranges. Nor do they aim at extreme accuracy of fire. They believe in *rafales*, and consider these sudden, violent, but short outbursts of fire to be the most efficient method of destroying the *moral* of the hostile troops. Batteries are very quick at coming into action and very quick at opening fire.

The French believe their artillery to be vastly better than that of any other Power; they claim superiority over the German in everything except the weight of the gun, and look upon their tactics as far more modern and efficient. They also claim a great advantage for 4-gun over 6-gun batteries, and say that the former give better results and are preferable in every way. An excellent article dealing very completely with French artillery methods appeared in the *Army Review* for April 1912, and I can recommend this to anybody desirous of entering upon a more detailed study of this subject.

The Germans deny any marked superiority of the French field artillery. They say that the French gun is too heavy and cannot be man-handled as easily as theirs, and they argue that any slight inferiority of their own field gun will be more than compensated for by the large numbers of howitzers they will put into the field. There can be no doubt that German artillery tactics have improved considerably in the last few years. As already stated, indirect fire is now

used. Dispersion of guns is far greater now than formerly. Inter-communication is chiefly by telephone and is good and complete. Guns are occasionally kept in reserve, but always in positions of readiness, in order to be able to open fire whenever required. Night firing is practised at artillery practice camps. On the march a large proportion of the guns are always well up to the front, and these come into action as early as possible. Light howitzers are used much like ordinary field guns. Fire discipline is good, and officers expose themselves less than was formerly the case.

On the whole, there can be little doubt that the French field artillery is decidedly superior, both in *materiel* and in methods, to the German, but it is questionable whether this inferiority on the part of the Germans will not to a very great extent be counteracted by their superior numbers and by their extensive use of howitzers.

Both French and German field batteries have observation ladders; branches, potato plants, etc., are often used to conceal the ladders, or the shields, if the latter are used without the ladder. The horses are good, and there is little to choose between the two armies in this respect; they are not up to the standard of their cavalry horses, nor up to that of our own field artillery.

### THREE ARMS COMBINED.

The keystone of both French and German tactics is the cult of the offensive. All teaching has this object in view, and throughout the army and the nation the doctrine of the offensive is preached as the only hope of success. Both armies firmly believe in the offensive, and both intend to adopt a vigorous offensive in war. But the theories of offence and the methods of attack are different, and the difference is so important that it is necessary for us to examine the principles underlying each school of thought.

The German theory of battle is simple—to advance on a wide front, making use of all roads, to deploy early, to attack the enemy as soon as he is met, to attack him everywhere and to seek his flanks. These methods require little manœuvring skill and comparatively slight information, except as to the general area occupied by the enemy. Their success depends mainly on numbers, vigour and energy, hard hitting, and mutual co-operation. The plan aims at envelopment, since the Germans are of opinion that a frontal attack will be most difficult and costly against modern firearms; the Germans also hope by this method of attack to impose their will upon the enemy and to gain the initiative. All the commander-in-chief can do is to make up his mind from the information at his disposal where the enemy is, and to set his army in motion; having done so, and having no powerful reserves at his disposal, he is no longer in a position to exercise a complete control over the battle, as the initiative soon passes into the hand of his subordinates. Even if fresh and valuable information be received, the commander-in-chief can do but little to alter his dispositions, and he is no longer able to change his plans once his army has been launched against the

enemy. It is, therefore, clear that the German plan presents certain serious objections, and a great deal depends on accurate information and a correct calculation of the exact area occupied by the hostile troops. On the other hand the German system is absolutely simple, and simplicity has always been the surest road to success in war; what has been true of past campaigns is even more likely to be the case in the gigantic struggles of the future, when millions of men will be facing each other and when the nerves of all ranks, from the commander-in-chief and his staff down to the private soldier, will be strained perilously near to breaking point. Of course, the cult of initiative must be very highly developed, all ranks must be strongly imbued with the spirit of the offensive, discipline must be excellent, the co-operation of all arms must be thoroughly good, and, last not least, there must be perfect loyalty among leaders. In 1870 the first battles of the war were brought on by the initiative of certain German leaders, rather against the wishes and plans of the commander-in-chief, *e.g.*, Wörth, Spicheren and Mars-la-Tour; they were won by the vigorous offensive methods and excellent discipline of the German troops, as well as by the unswerving loyalty and perfect mutual co-operation of the German leaders. The Japanese adopted similar methods with similar success in many of their Manchurian battles. The Germans have a firm belief in these simple and vigorous methods, and have made it one of the principal objects of their peace training to inculcate the initiative among all ranks which is necessary for the successful execution of their plans and theories in war.

The French theories differ from the German in certain important respects, although they are also based on a thorough belief in the offensive. The main point is that the French wish to be able to manœuvre after receipt of valuable information, and to keep the control of the battle in the hands of the commander-in-chief as long as possible. With this object in view, they avoid premature deployment, maintain a strong general reserve, and keep their forces in a formation that will enable them to strike an overwhelming blow at some vulnerable point in the hostile line of battle. For the successful execution of this plan, good and early information is indispensable. Until quite recently, the French hoped to acquire this information by means of a strategical advanced guard, a strong force of all arms pushed out well to the front of the main army. This idea met with a great deal of opposition, and now it is probable that the French will trust mainly to their cavalry and air craft to secure the necessary information regarding the enemy's movements.

The great advantage of the French theory is that, if his information is good, the commander-in-chief, having retained control, is in a position to deal a crushing blow at the enemy; his plans are made with full knowledge, and there should be no chance of his stroke falling in the air. The French methods may be facilitated by superior information from air craft, which are likely to play a great part in the next great war. This superior information and greater clearness seems rather likely to be more in favour of the French than of the German



system, as the latter works almost equally well in the fog of war. On the other hand, there is the great danger that the commander-in-chief will delay too long in forming his plan, and may make up his mind too late, with the ultimate result of losing the initiative. If he forms his plan too early, without sufficient information, he abandons the advantages conferred on the German system by their spirit of offensive and initiative, and gives up the chances of brilliant success aimed at by the French ideas: if, on the other hand, he delays in making up his mind until the hostile attack is in full swing, he will probably be crushed before he has time to carry out his plan of counter-attack.

This is likely to be excellent in both armies. A most valuable factor in this is the system of constant **Co-operation of all three arms.** attachments of officers to other arms throughout the service, commanding units of other arms and taking the utmost interest in them. These attachments are for periods of up to nine months, and are really "postings," rather than attachments: during this period, officers are treated exactly as officers actually belonging to the unit, and on manoeuvres one often sees a cavalry officer commanding a battery, an infantry officer leading a squadron, and so on: officers of one arm do not look on the other arms as a "different show" which doesn't concern them, a regrettable attitude which was until recent years taken up by many British officers.

#### MACHINE GUNS.

The great importance of machine guns is fully realised by both countries.

In Germany the organization is in companies or batteries (for cavalry) of 6 guns each, commanded by a captain. At present every other infantry regiment has a company, so that each infantry brigade, of which there are 108 in peace, has a company, *i.e.*, there are 6 guns per 6 battalions, an average of 1 gun per battalion. When the distribution is complete, each regiment (3 battalions of 4 companies each) is to have a machine gun company; this is called the 13th company of the regiment, and is really treated as a special arm, almost solely as a support to the infantry.

There are also 16 batteries for employment with the cavalry, each division of which is to have a battery in war.

In the French army the organization is in sections of 2 guns, each battalion to have a section. As this distribution is practically completed, the French are numerically ahead in machine guns. However, this superiority was never likely to last for any length of time, and the new German Army Bill has now provided for the necessary increase to one company of 6 guns per regiment, so that the numerical strength of the two armies in machine guns will soon be equal. The new guns will probably be supplied in the course of 1912-13.

The German machine gun companies are manned by picked officers and men, and are good and thoroughly efficient. They are

sub-divided into 3 sections of 2 guns each, commanded by a subaltern, but are generally kept concentrated; however, although German opinion tends to favour concentration of the entire company in the majority of cases, this is by no means an invariable rule, and on manoeuvres machine gun companies may comparatively often be seen with a section detached on a special mission, and occasionally all 3 sections working independently. The allowance of practice ammunition is very large, and a number of spare men are trained to take the place of casualties in the ranks of the machine gun companies in time of war. In fact, German machine gun companies constitute a formidable arm, manned as they are by real experts, officers as well as non-commissioned officers and men. Their drill and discipline, rapidity of coming into action, and general methods, are excellent.

The French employ their machine guns with considerable skill, and their utilisation of cover is decidedly good. They aim mainly at invisibility and surprise action, and are very careful to avoid their guns being overwhelmed by artillery or caught under close rifle fire. Guns are usually kept back at first, and are rarely pushed forward into the firing line in the early stages of the action. They are practically always employed in pairs, the guns fairly close to each other, considered as a kind of concentrated infantry. French opinion is generally opposed to the grouping together of machine gun sections, as they consider the target thus offered to be too large, and have not forgotten the lessons of 1870-71 in this respect. Their guns are carried on pack ponies or mules, unlike the German, which are on carriages. Neither approve of long distance fire, and rarely fire at ranges of over 1,000 yards, except at a very favourable target.

#### AERONAUTICS.

The Germans have deprived the French of the lead they formerly had in this respect, and are now slightly ahead of their rivals. In all there are some 25 dirigibles built or building in Germany, of which the State owns 8, whilst 3 or 4 more are building. In 1910 dirigibles had to a great extent lost favour in Germany, owing to the successes of the aeroplanes, but in 1911 a lot of improvements were made, and a number of successful performances recorded, with the result that the military authorities are again taking a more lively interest in them. The Zeppelin (rigid) and Parseval (non-rigid) types are the most favoured at present.

The French have a total of about 20—21 dirigibles in the country, built or building, of which 9 are owned by the State and 6 more are building. As a general rule, however, they are not equal to the German airships in size, speed, or general efficiency. However, the French do not intend to abandon the use of airships, and an official pronouncement has recently been made to the effect that it is intended to keep up an establishment of 23 dirigibles in the French army.

In aeroplanes the French are at present vastly ahead of the Germans, and are likely to retain their lead, for a year or two at least. On the other hand, the Germans are certain to make a great effort to get at least on level terms with their rivals in the course of the next few years. We must remember that in motors, as in dirigibles, France led the way, but has since been caught up. The Germans are a very thorough and capable nation, and, having realised the value and importance of aeroplanes, will work extremely hard at them. As regards the relative suitability of French and Germans as flying men, the Military Correspondent of the *Times* made the following remark about the Germans, with which, however, I am not altogether in agreement:—"The service of aeroplanes, like that of quick-firing artillery, is not well suited to large bodies and slow minds."

Both nations are at present in favour of the use of aeroplanes for reconnaissance only, and there appear to be no definite plans for offensive action. A good deal of attention is, however, being devoted to bomb-dropping and also to the attack of hostile machines. Numerous trials and experiments are being made in both countries, but strict secrecy is maintained regarding them, with the result that little information is available.

The German air troops consist of three Prussian battalions, including Saxon and Württemberg sections, and a Bavarian detachment, the whole under an Inspector. The total peace strength of these air troops, including the Bavarians, is about 90 officers and 1,100 men, besides a number of officers learning to fly or undergoing training as observers. The total number of aeroplanes in Germany is probably somewhere near 200, of about a dozen different types, of which 5 or 6 are excellent, and practically equal to the French. The Government now owns some 50 machines, but many more have been ordered. The number of pilots is about 150, of whom some 50 are officers. It is intended to make use of civilian pilots in war, with officers as observers. A number of officers are constantly undergoing courses of training, some as pilots and some as observers. Every military aeroplane is to carry a trained observer. Monoplanes are rather more popular than biplanes, and most of the best flights have been made on them.

Eight aeroplanes, 4 on each side, were used at Imperial Manœuvres last year (1911), and the officer observers sent in excellent reports, although the aeroplanes flew rather too low as a rule. However, the Kaiser was very pleased, complimented the aviators, and bestowed decorations upon them. Dirigibles were also used.

The utmost encouragement is at present being given in Germany to aviators, both military and civilian. There are numerous flying weeks all over the country, at which large prizes are given. Military officers receive extra pay, accelerated promotion, decorations, and other rewards. Prince Henry, the Kaiser's brother, is himself

a certified pilot. A sum of over £1,000,000 will be spent on aeronautics during the course of 1912.

It is quite impossible to give even approximately accurate figures regarding the number of aeroplanes and pilots in France, as these numbers are constantly increasing. It may, however, be accepted as fairly certain that there are somewhere near 2,000 flying machines in France, with nearly 1,000 pilots, of whom from 200—300 are military officers or non-commissioned officers. A large number of officers and non-commissioned officers have moreover been trained as observers. At the beginning of 1912 the Government owned about 240 machines, and a lot more had been ordered as the result of last year's trials. It is likely that there will be over 500 State-owned machines by the end of 1912, whilst it is intended to add no less than 400 more in the course of 1913. Approximately £1,300,000 will be spent by Government on aeronautics during 1912, in addition to which private subscriptions have realised nearly 4 million francs.

Aeroplanes did excellent service on manœuvres, both in 1910 and 1911, and the utmost enthusiasm prevails in France over these successes, as it is hoped that this superiority over Germany will give the French an important advantage in the next great war. Every encouragement is given to aviators: prizes, rewards, promotion, decorations, extra pay, notoriety, and the honour and glory so dear to a Frenchman's heart.

There are now some 50—60 training schools in France, generally managed by the manufacturing firms and attended by pupils from nearly every country in the world. There are 8 or 10 military schools, and one is to be started in Algeria.

#### ENGINEERS.

There are in the French army 26 battalions of engineers, including air troops. In war these expand into field companies, pontoon companies, engineer parks, engineer trains, air companies, telegraph and railway companies.

The German engineer corps proper is almost entirely confined to fortress work and the construction and maintenance of permanent fortifications.

The pioneers correspond to our field companies and bridging trains. There are at present 29 battalions of pioneers, which number is to be increased to 31 under the terms of the new Army Bill. These pioneer battalions expand on mobilization into field companies, bridge and siege trains. They are efficient troops, consisting mainly of artisans and skilled mechanics; most of the men are said to be social democrats. The officers are not of as high class as in the rest of the army; they enjoy the reputation of possessing considerable theoretical knowledge and little practical ability, as evidenced by the following couplet:—

“ Der Pionier, der Pionier, das ist der Mann,  
Der alles weiss, und gar nichts kann.”

### TRAIN, COMMUNICATION TROOPS, AND MECHANICAL TRANSPORT.

In peace the French have 72 companies of *train*, in war expanding into supply columns, supply parks, field batteries, and transport companies, whilst they furnish personnel for medical units, remount dépôts, cattle parks, etc.

The service of communications is almost entirely in the hands of the engineers, who, as already stated, furnish air troops and the telegraph and railway companies.

As regards mechanical transport, this was used with considerable success at the Grand Manœuvres in 1910, when the entire transport of the Blue Army, excepting the first line transport, was mechanical. There are some 40,000 motor-cars in France, as well as nearly 20,000 vehicles used for commercial purposes. In July 1910, however, it was stated in an official paper that there were only some 1,500 motor lorries which the army could use in war.

The German *train* consists of 23 battalions in time of peace, expanding in war to supply columns, supply parks, bearer companies, field hospitals, field bakery columns and remount dépôts. The new Army Bill provides for an increase of two battalions.

The German communication troops are under a separate Inspector-General, and include railway and telegraph troops, the air battalion, and a mechanical transport battalion.

The railway troops consist of six Prussian and two Bavarian battalions, on mobilization forming construction, traffic, and workmen companies.

Telegraph troops consist of four Prussian battalions, each with a wireless company, and two Bavarian companies. On mobilization these troops are broken up into a number of detachments for army corps, headquarters of armies, and reserve divisions, as well as for the line of communications. A fifth Prussian battalion is being added by the new Army Bill.

A mechanical transport battalion of three companies has lately been formed, and is under the same Inspector as for the air battalions. There is also a Bavarian detachment.

The number of power-traction vehicles and automobiles available in Germany is now roughly as follows:—

Power-traction vehicles	...	between	3,000	and	4,000
Automobiles	...	...	25,000	„	30,000
Motor-cycles	...	...	25,000		

665 motor-traction vehicles were in 1911 subsidised by the German military administration, at a cost of £165,000, the value of the vehicles being £700,000.

### MANŒUVRES, BILLETS AND BIVOUACS.

Both in France and in Germany the utmost importance is attached to manœuvres. Field training generally begins early in May, and lasts until the middle or end of July, when the training

and manœuvre period commences. Regimental and brigade training and field firing occupy the remainder of July and the greater part of August. Towards the end of August, or early in September, divisional training and manœuvres begin and are usually over by about the middle of September. Army corps manœuvres bring the season's training to a close, except in the case of troops taking part in German Imperial or French Grand Manœuvres.

Very great interest is taken by the inhabitants in these manœuvres, especially in Germany. German troops are usually billeted on the inhabitants, by whom they are thoroughly well treated and heartily welcomed in all parts of the country. In many districts work is practically at a standstill during the more interesting part of the operations, when the entire population turns out to follow the troops, whatever the hour of starting and whatever the weather. In Great Britain the only parallel to this is found in the enthusiasm displayed by the public for league football matches. German infantry bivouac occasionally, but never have to sleep in the open; every man carries a small bit of tent, weighing about  $1\frac{1}{2}$  lbs., and they put these together and form shelters by squads or sections. Plenty of straw and firewood is provided on these occasions, which are pre-arranged. Mounted troops practically never bivouac, and horses are always brought in under cover at night, except in very unusual circumstances.

French troops are nearly always billeted on manœuvres, and are invariably well received by the inhabitants. Until a few years ago the interest displayed by the local population was markedly less than in Germany, but in the last year or two a change has come over France; the army is far more popular than it was, great enthusiasm is now shown by all classes, and the welcome given to troops on manœuvres is far warmer than formerly. The infantry carry no tents, with the result that troops bivouac less frequently than the Germans.

In both countries the system of billeting has been brought practically to perfection, and both armies will make extensive use of it in war.

#### STAFF AND LEADERSHIP.

The German General Staff possess great power in the army. The system of selection and the amount of competition afford ample guarantee that its members should be thoroughly able men. There is little jealousy outside, as the presence of real merit is recognised, and this in spite of the fact that the General Staff enjoy great advantages as regards promotion: for example, a General Staff officer becomes major about 6 years earlier than a regimental officer. The influence of the General Staff throughout the army is very great, and it does enormous service by spreading sound doctrines, and by keeping the army supplied with a constant current of modern ideas and principles. General Staff officers are required to keep in

close touch with troops, and must never lose their energy and activity; there are few stout officers on the German General Staff. The confidence felt by the entire army in the General Staff is very great, and is an invaluable asset.

One of the main reasons for the power of the General Staff is the strong and unassailable position of its Chief. His is a permanent post (Moltke was Chief of the General Staff for 31 years), and he enjoys great independence, being responsible to the Crown alone. In war he is practically Commander-in-Chief, although nominally only Chief of the Staff to the Kaiser. The present Chief of the General Staff is Field-Marshal Count von Moltke, nephew of the famous German general, and he has held the post for 7 years.

Until quite recently, the French General Staff were overburdened with administrative duties and unable to carry out their proper duties completely and efficiently. This is now no longer the case, but it will be some time before the French General Staff can be expected to exercise the influence and wield the power possessed by the German General Staff.

On the whole, therefore, the Germans may justly lay claim to superiority in the matter of their staff. In the field their staff work is likely to be slightly more thorough and perfect than the French, although the latter has greatly improved and is now very good and intelligent.

Another most important point is that of leadership, with special reference to mutual co-operation between commanders in the field. The Germans believe their leaders to be more loyal to each other than the French, and point to the lessons of 1870, when so many disasters were caused by the want of loyalty and co-operation between the French generals. The latter have often shown a tendency towards political intrigue, and this is a most dangerous thing; they have allowed their ambition to exceed their sense of duty and patriotism, and have played for their own hand, usually with disastrous consequences to the cause of their country. There is reason to believe that French leaders have improved in this respect, but if not, the defect is a serious one, which may well lead to defeat and final disaster. Recent wars have borne out the teachings of 1870 with regard to this most important matter, and have afforded ample evidence of the ruinous effects of jealousy among officers of all ranks and arms, and more especially among the higher leaders.

#### CHARACTERISTICS OF GERMAN TROOPS.

A wide gulf exists between German officers and their men, and

##### Officers.

the existence of this gulf is considered essential for the maintenance of discipline. For instance, until quite recently, it was an unheard of thing for officers to play any game with their men, or to join in any of their amusements. Even now it is an extremely rare thing, and is discouraged by almost all the senior officers. In North China, during the Boxer troubles in 1900-1901, I played a lot of football with the

Germans, but only one officer could be induced to play, a Hanoverian, and quite a useful player: most German officers, to whom I tell this story nowadays, appear to doubt my veracity, quite politely, as they know the intense feeling obtaining 10—12 years ago against any familiar intercourse with the men.

The early education of the German officer is very thorough and complete, and he joins his regiment far more highly educated than the young British officer. After that, however, unless he is one of the few to go to a colony, or unless he passes into the Staff College, he is condemned to the routine of regimental life for some 15 or 16 years as a subaltern. He has not got the opportunities of varied service all over the world that our officers enjoy. Some people are of opinion that life in a British or Indian regiment becomes monotonous after a time. However that may be, it is infinitely worse for the German officer, who has a large fresh batch of recruits to train each year for 15 years as a subaltern, and for 10 or 12 more as a captain; (in Germany recruits are trained by the company commanders in the companies, and not by the adjutant as in the Indian army). It is therefore inevitable that he must become something of a machine and lose individuality. And there can be no doubt that many German regimental officers, especially in small stations, incline to become dull and narrow-minded; they have a decided tendency to put on flesh and, although zealous and highly instructed in their professional duties, are by no means ideal or inspiring leaders of men. Although some go in for shooting, they play no games as a rule, except a little mild tennis, and spend a lot of their time in restaurants. The young German officers are, however, showing a great improvement in this respect; without exaggerating and overdoing their love of sport, they are far more energetic than the older generation; a good many of them are keen shikaris, whilst they go in for other sports to a fair extent, such as swimming, skating, and ski-ing (as well as the pursuit of the fair sex). The senior captains are perhaps the worst officers in the German army, as such a large proportion cannot be promoted any further: men of 45 to 50 years of age, most of them with little hopes of promotion, they cannot be expected to be dashing leaders of men. The more senior officers, colonels, generals, and staff officers are of a very different type: keen and ambitious soldiers, devoted to their profession, active in body and mind, highly trained and imbued with similar doctrines and intense loyalty to Kaiser and country, they will compare well with any others in the world.

The general feeling among German officers is that, in the event of Germany's success in a great war, the country defeated and conquered by them should be treated with harshness, and that such severe terms should be imposed as to prevent that country from ever rising again to give any trouble or to be in any way dangerous to Germany. If Great Britain happened to be this country, she is undoubtedly likely to be treated with particular severity, with



the result that she would descend to the position of a second-rate Power.

The average non-commissioned officer, especially in North Germany, is a somewhat hard and unsympathetic martinet in all matters relating to duty, although there are many exceptions. **Non-commissioned officers.** He is well educated, highly trained, and thoroughly well versed in all the details of his work, but is rarely either quick or resourceful. He has his men completely in hand, and is a great help to his officers. The numerous cases of ill-treatment of soldiers have decreased considerably of late years, although they have by no means ceased.

These remarks apply mainly to the re-engaged men and professional soldiers, who form the backbone of the non-commissioned ranks. The remainder consist of men promoted during their two or three years' service, and of one year volunteers promoted after a few months with the colours; the standard of education and intelligence of these men is generally higher than that of the long-service non-commissioned officers, but they are too young and inexperienced to have the control over the men possessed by the others.

The character of the average German recruit when he joins is mild and docile. He has an innate and intense respect for everything in the shape of authority, and fervent loyalty and devotion to the Fatherland. **Rank and file.** The hard work and harsh treatment in the ranks stiffen him, and at the end of two years he is a greatly changed being; he has grown from a boy to a man: his physique has improved immensely, his character has hardened, and he has gained confidence and self-reliance. Some men suffer from their treatment, and a few leave the army with hatred for the service, but there can be no doubt that the manhood of Germany is enormously strengthened and improved by their system of compulsory service.

The physique of the German soldier is good; he is cheerful and enduring, an excellent marcher, he has a strong sense of duty, and is imbued with a spirit of implicit and unreasoning obedience to orders. He is intensely patriotic, and, even if he is a social democrat, his socialism will not prevent him from fighting well, and doing his duty to the best of his ability; he is a German first and a socialist afterwards. He is a brave and plucky fighter, perhaps without much dash or individuality, although by no means a machine; he is thoroughly confident in his leaders and in his army, imbued with the spirit of the offensive, stubborn and ready to give unhesitating obedience to his superiors, and at all times to go wherever he is sent and to do whatever he is told to do.

The German army is by no means perfect, and its methods of training may result in heavy losses and rude surprises in the opening battles of a great campaign, but it is nevertheless a most formidable engine of war, the strength and efficiency of which its adversaries should be careful not to under-estimate.

## CHARACTERISTICS OF FRENCH TROOPS.

French officers are real professional soldiers, highly trained, keen, and efficient. They are not of such high social class as the German officers, and do not occupy the same commanding position in society. They lost caste to a considerable extent during the Dreyfus case, but have recovered much of the lost ground in the last few years. Of course France is a very democratic country, and it would not be possible for one particular class to be considered superior to all others; money counts for so much in any democracy, and the French officer class is extremely poor.

The French officer is in general more intelligent than the German, for he has to lead his men and not to drive them; this keeps his brain more active. He is very hard-worked and has little time for recreation; he does not incline to stoutness quite as much as the German officer, but is not physically as fit or active as the British officer.

The chief weaknesses of the French corps of officers are—(1) Their dual origin, more than half having passed through the ranks. Those coming from the cadet schools are more highly educated and, although fewer in numbers, occupy most of the best billets and highest positions. Hence a certain amount of jealousy and discord; (2) a tendency to politics. Frenchmen are born politicians, and there has always been a tendency for officers to dabble in politics, a dangerous thing. German officers have little or no politics, except a hatred for social democracy.

The French non-commissioned officer is highly trained, well educated, and generally ambitious, as he probably hopes to get a commission sooner or later. The *adjudant*, or warrant officer, is the link between officers and non-commissioned officers, and is generally a most useful person, although he often does not make a brilliant officer on promotion, owing to his being too old for his rank. The non-commissioned officer has rather a difficult task, for the French soldier is a very different person to deal with than the German. On the whole, the French non-commissioned officer has less influence over his men than the German, especially those promoted during their two years' colour service.

The French soldier is active in body and mind, intelligent and energetic, sober and abstemious, a good marcher and keen fighter. He is of an independent character and critical nature; he is apt to criticise his leaders and the conduct of operations, and hates inaction at all times. When he likes and respects his superiors, he is capable of great things; when he mistrusts them and doubts their military efficiency, he has a tendency to become sullen and even insubordinate. He is a "handy man" in the field, and understands how to take care of himself; nearly every Frenchman is a good cook. The physique of the French soldier is not quite up to that of the German, who is

really a picked man, but French infantry have in the past performed wonderful feats of endurance, and will do so again, provided they are well led.

French troops may not altogether appeal to our idea of smartness; they are rarely well dressed, their clothes usually fit badly, they often look untidy, and a stranger ignorant of their real character might be led to compare them unfavourably to British or German troops. Such a comparison would be foolish and unjust; no idea can be formed of the value of French troops except by seeing them at work in the field, where they show their true qualities.

A good point of the French soldier is his capacity of doing a hard day's work on a little food. He usually has a cup of coffee and a piece of bread when he gets up, and can keep going a long time on this. There is much less drinking in the French than in the German army. In 1908 I once asked a Bavarian soldier what was the largest amount of beer he had ever drunk in one day. He said "37 pints" and asserted that he had not been drunk in the process; German officers have assured me that this performance, although creditable, was by no means abnormal.

French discipline is not up to that of the British or German armies, and it is quite possible to conceive it breaking down to some extent under the strain of reverses. On the other hand, Germans and Englishmen are rather apt to misunderstand French methods. They are not as bad as they might occasionally be thought to be; the mechanical precision and accuracy of German infantry are lacking, but would not suit the French any more than their free elasticity of movement would be suitable to the Germans. French soldiers have to be led, not driven. Unlike in Germany, where the soldier is taught to respect the rank and uniform of his superiors above all things, the French soldier is inclined to respect the man rather than the coat he wears.

The French soldier is a vain person, who likes "showing off" and being patted on the back. Napoleon understood this very fully, and was constantly publishing orders praising his "incomparable troops," telling them what he wanted done, and explaining that he was asking them to do wonders, but had every confidence in his soldiers and knew they would not fail him. This is exactly the sort of treatment a Frenchman likes, and Napoleon's troops certainly achieved the well-nigh impossible for him.

The evil effects of anti-militarism and socialism are much less apparent than formerly, and things have steadily improved in this respect.

Sport has of late years made great strides in France and in the French army, perhaps to some extent owing to the *entente cordiale*, and has had most beneficial results.

#### RELATIVE FIGHTING VALUE OF FRENCH AND GERMAN TROOPS.

Speaking very generally, the question resolves itself into one of French intelligence and initiative against German discipline and

training. The French are not without discipline, however, nor the Germans without intelligence.

The physique of the Germans is superior to that of the French owing to the larger number of men at their disposal, from whom they can pick and choose, whilst the French have to take practically everybody. Still, the French are well up to their work, although there may be rather more stragglers in French than in German columns.

In the German army there are certain non-German elements—Poles, Alsacians, Lorrainers, and Danes. This is a slight disadvantage. The value of the French army corps varies a good deal, those from the south being more intelligent than the northerner, but of inferior physique as a rule. The French, in their anxiety to keep up their contingents, have been obliged to take a number of Apaches and bad characters, although the worst of these are sent to the African Light Infantry and to disciplinary companies.

It is often asserted that German troops cannot bear heavy losses and will be unable to stand a serious reverse. I am of opinion that this accusation is without justification, and that the Germans will go on fighting stolidly and stubbornly, in spite of early checks, which it is highly probable they may receive. It is true that they behaved badly in 1806, after Auerstedt, when the Prussian army melted away before Napoleon's vigorous pursuit; since that time, however, the German nation has undergone an immense change for the better, the result of a hundred years of universal military service, a system which has done so much to develop and strengthen the physical and moral qualities of the whole of the German race that they have good reason to be confident in their power to face even defeat and disaster with steadfast calmness and courage.

As regard the non-commissioned ranks, a slight superiority must be accorded to the Germans, whose control over their men is undoubtedly greater than that of French non-commissioned officers.

In respect to the officers, a comparison is difficult. Both are very good and efficient.

The German officer is of higher class, is well up to his work, and has great power over his men. The French officer is more intelligent, has rather more general experience, knows his work perfectly, and also has a good deal of control over his men.

The German corps of officers is more homogeneous than the French; the latter includes so large a proportion of rankers, many of whom are of different class to the others. Political influences also make themselves felt to a certain extent among French officers, a bad point. No German officer has a vote, nor may he interfere in politics, except that he is bound to do everything in his power to combat Socialism.

German officers are better linguists than the French. Both are thorough professional soldiers, with no thought of leaving the

service until they are compelled to do so; German officers are more inclined to leave, as their high position in society gives them better chances of marrying money, and they are far more "chased" by rich ladies than are French officers. There is little "grousing" or grumbling among either corps of officers; their pay has recently been raised, and the system of pay is excellent in both armies, being in proportion to their length of service in each rank, or of total service.

Neither French nor Germans are equal in physique or activity to British officers.

#### MILITARY SPIRIT, MORAL, AND PATRIOTISM.

In Germany the military spirit and *moral* are very high indeed. Every man is proud to be a soldier, and the nation is educated and brought up on glorious traditions. Everybody either remembers 1866 and 1870, or constantly hears parents and relations talking about these great deeds and famous victories. The confidence reposed by Germans in their army is intense, so great as to be almost a danger.

Patriotism is fervent, and all the States, North German and South German, will go together in case of war. It is true that the Bavarians cordially dislike the Prussians, whilst the latter rather despise the former, but this will not affect their loyal co-operation in war. There is deep earnestness throughout the army, and its value and importance to the German people and Empire are fully realised, both by soldiers and civilians.

In France, the *moral* was very low a few years ago, *e.g.*, in 1904 and 1905, but things are quite different now. Frenchmen are tired of constantly being bluffed and bullied by Germany, and were ready and eager to fight last year. The certainty felt by them that we should assist them loyally and whole-heartedly with all our available forces, by sea and on land, has the effect of raising their *moral* immensely.

#### RELATIVE CHANCES OF VICTORY OF FRANCE AND GERMANY IN A WAR BETWEEN THOSE NATIONS.

It is difficult, and needs a great deal of study and experience, to draw a useful and trustworthy comparison between the value and efficiency of the French and German armies. I have attempted to show the physical differences, *i.e.*, as regards numbers, armament, equipment, etc., and also the moral factors which point to success in war, as far as they can be judged from seeing these armies at work in time of peace.

On the whole, it would appear that the Germans should have the better chance of victory when it comes to the great test. The balance is certainly in their favour.

But we must remember that, although numbers, armament and training are of great value, *moral* is of even higher importance. The nation that goes to war in a good cause, anxious to fight, hating the enemy and longing to crush him, starts with an enormous

advantage. As regards the keenness of the nation on war, the French had the advantage last year. They still want vengeance for 1870. Gambetta's saying "Always think of it: never speak of it" is still remembered, although it would hardly be true to say that the French obey the latter half of the behest. On the other hand, the Germans have no particular animosity against the French; the feeling is rather one of contempt, but their hatred is mainly directed against us. The heart of the nation would be in a war against Great Britain, to a far greater extent than against the despised French.

There is the old and hackneyed maxim of Napoleon, "The moral is to the physical as three is to one." He said it of French troops, and it remains absolutely true of French troops. *Moral* means a vast deal to the French; if they believe in their leaders and are confident of victory, they have an excellent chance of victory; if they feel no special keenness for the war, and if they are doubtful of success, they will certainly lose.

In the next great war, much—almost everything—will depend on the spirit in which the French enter upon the campaign. A few years ago, in 1904—1906, they would have been beaten before the war began; last September, the French army and nation were very different, and would have been a hard nut to crack.

It is now nearly 100 years ago since the power of Napoleon was finally crushed at Waterloo. Barely 25,000 British troops took part in this great battle: the remainder were Germans, Hanoverians, Dutch and Belgians. Our present expeditionary force is not large, but it is very efficient, and its strength at all events exceeds 150,000 men.

Some 20 years ago, and even until more recent years, the British army counted for very little in Europe. It was looked upon as a peace army, totally unready for any war, the rank and file recruited by hunger and crime from the dregs of the nation; the officers an idle and inefficient band of sport-loving amateurs, completely devoid of any professional keenness or military knowledge. Bismarck said, "If the British army dares to set foot on German soil, I will send for the police and have them locked up." This was the general opinion until a few years ago. But in the last 8 or 10 years the reputation of our army has been rising steadily, and foreigners are at last beginning to take us seriously, although they still say that our officers care too much for sport and amusement and too little for their profession. Anyhow, last summer the leading French military newspaper—"La France Militaire"—said that, for its size, the British regular army was the most efficient in Europe. It did not mention the territorial army—nor will I.

The question therefore arises—and it is one of immense importance—Is this British regular army or rather striking force large enough to make an appreciable difference in a great continental war?

In answering this question, I should first of all like to emphasise the fact that I do not consider a great European war to be inevitable. Last year a war between Great Britain and France on the one hand and Germany on the other appeared to very many people throughout

Europe to be a practical certainty. It is to be hoped that such a ruinous struggle, with its awful loss of life and incalculable damage to trade and national prosperity, may be avoided, and it is quite certain that the British Government will do its best to maintain peace, as no sane Englishman desires war with Germany.

If, however, Great Britain were reluctantly compelled to take part in a European war, the intervention of the British expeditionary force on foreign soil might well decide the issue of the campaign. We must remember that the first-line troops of France and Germany will, when they meet in the first great shock, not number very much more than a million, or  $1\frac{1}{4}$  million each. And they will be more or less equal in point of numbers. The German numerical superiority will not make itself felt much at the beginning of the campaign: they must leave something on their eastern frontier.

The answer to my question is given by the French themselves, as so often expressed in the writings of their leading soldiers and military experts. They say frankly that they would like a larger reinforcement than of 150,000 men: in 10 years' time, 150,000 men will be inadequate. But they do not despise the British expeditionary force with its 150,000 men, and realise that they may make a tremendous difference.

A body of 150,000 magnificent troops, led by good officers and commanded by able generals, would of themselves be of enormous importance, but still more considerable would be the increased value in *moral* accruing to the French army and nation, when they saw that they were to be supported from the very beginning of the struggle by the whole power of the British Empire. But our support must be timely and whole-hearted. Every available man must go at once and our army must be over in time for the first battle.

THE CHAIRMAN: I think all present will agree with me that we have listened to a most interesting lecture delivered by an officer who, from the exceptional opportunities he has enjoyed, is in a position to give us a most valuable opinion on the relative merits and demerits of the French and German armies. If ever those two great nations should go to war we have to remember that that war will be on a bigger scale than it has ever been waged before. The great battles of the past, even such giant conflicts as those of Leipzig, Gravelotte, and Mukden will be dwarfed into the utmost insignificance. We have seen in the past battles of tens of thousands of men and even hundreds of thousands, but in such a war millions will be engaged; for although the first lines of troops will only consist of one million men on either side they will be backed by armies of greater proportions. Now the German doctrine of war which Captain Twiss has touched upon is roughly that you must make a fixed plan of action up to the first battle and that you must stick to that plan up to the bitter end, no matter what the enemy may do. That plan must be carried out with such resolute determination that it will actually create the situation. The French, generally speaking, have a

different doctrine, though the latest school of thought is not in favour of it. They endeavour by the use of a large protective force to form a kind of bait to the opposing and advancing columns of the enemy. This bait would have such an attractive effect on the enemy that it would paralyse their efforts by concentrating excessive attention on itself. That no doubt was the plan of action frequently adopted by the great Napoleon with signal success, but it is held by some to be impossible because the masses in rear, to which it is supposed to give freedom of action, are not now sufficiently mobile. I do not think however when one studies the subject deeply that this objection is altogether valid, because we have now got the transporting powers of railways and no one can say what could not be done if the railways were used to the utmost limits as transporting agents. This French doctrine has the disadvantage that Captain Twiss mentioned, that the General might wait too long on the action of the protective force and thereby lose all initiative and the power to act on the offensive. But because a doctrine is not "fool proof" that is no reason for putting it aside.

The French at the present moment, it may be said, have got a very good opinion of themselves and think they are going to win. They are however a very mercurial nation and whether this optimism will disappear or not remains to be seen. A French officer told me a couple of years ago that the French Republic would never fight willingly, because, if their armies were beaten, every one would say it was the fault of the Government and the Government would disappear, and if they were victorious the soldiers would make the commanding general Emperor of the French; and so in any event the Republic would pass away.

I think we have many lessons to learn from the German methods. The first is to see the way in which they regard war. All men of position insist on thorough preparation and on efficiency. In the event of defeat all civil progress, every kind of commercial prosperity, education, railways—everything suffers, and therefore all civil progress must be subservient to the necessities of the army. It is not the army that should get the leavings. That is what the Germans believe in. We ought to study the German and the French methods because we might have to fight alongside or against one or the other. French writings are always of great interest, they are generally of great originality and sometimes of great brilliance. Therefore we should study them. German writings are not so interesting, but at the same time they are full of thoroughness. That is the great point about the Germans. The German policy is to march without looking right or left straight to the goal at which it aims.

We have our own problems to solve which are not less complicated than the French or German. It would be a mistake to adopt blindly the French and German methods; we have our own ideas and some of these are very sound. They are based on experience and the Germans have not had the same kind of experience that we have had.



Let us therefore not cast away our own ideas ; but endeavour to graft on them what is sound and suitable in the French and German methods. Nothing now remains for me except to ask you, ladies and gentlemen, to join with me in thanking Their Excellencies for the great honour they have done us in coming here this evening, and I am sure I only say what is in everyone's mind when I add that we are deeply grateful to Captain Twiss for the very admirable lecture which he has given us.

## THE USE OF THE BAYONET.

BY MAJOR G. A. TRENT, INSPECTOR OF PHYSICAL TRAINING.

"The essence of infantry tactics consists in breaking down the enemy's resistance by the weight and direction of its fire, and then completing his overthrow by assault. Although the enemy may not await the assault, infantry must be constantly animated with the desire to close with him.....To drive an enemy from the field, assault or the immediate threat of it is almost always necessary."—*F. S. Regulations, Part I, Chapter I, para. 6 (2).*

"The climax of the infantry attack is the assault which is made possible by superiority of fire."—*F. S. Regulations, Part I, Chapter VII, para. 106 (5).*

The above extracts from the F. S. Regulations clearly emphasise the importance and necessity for infantry to be thoroughly instructed in carrying out the final stage of the attack, *i.e.*, the actual assault. It follows that in order to make a successful assault, provided the enemy awaits the attack, which is possible if he is confident in his ability to use the bayonet effectively, a thorough knowledge of the use of the latter is essential. Have our soldiers this knowledge? If not, it is extremely doubtful whether they will be "animated with the desire to close" with an enemy whom they know can use the bayonet. In their ignorance, in the first engagement, they might wish to come to close grips, as soon as possible, but if in peace time their instruction in handling the bayonet had only been superficial, they would probably suffer severely, and the survivors, in the next engagement, would possibly be animated with the desire to avoid closing with the enemy, and would endeavour to overwhelm him by fire alone.

Now the attainment of superiority of fire alone will seldom drive an enemy from the field, but only paves the way for the assault; and therefore if the men once realise their inferiority in the use of the bayonet, they may shirk the actual hand to hand fight and fail to reap the full benefits of a crushing defeat.

The whole situation may be summed up by the words "efficiency" and "confidence." Confidence follows efficiency as a natural sequence, and men confident in their efficiency to use the bayonet to the best advantage will from the very commencement of an attack be animated with the desire to push on and close with the enemy, rather than trust to fire alone, which we are told in Field Service Regulations, Chapter I, para. 6 (2), will seldom force an enemy (unless enfiladed) to retire, and the decision by which, even if possible, takes long to obtain.

Is this confidence, which arises from efficiency, sufficiently recognised as a valuable asset in inducing men to push on, and in animating them with the desire to close with their opponents? Officially it certainly is, as paragraph 2, Appendix I, Infantry Training states that "every encouragement should be given to men to

practise bayonet fighting." But it is doubtful whether this point is not sometimes overlooked in units, and bayonet fighting regarded as of secondary importance.

This article, however, is not intended to point out the importance of men acquiring proficiency in the use of the bayonet, but rather to point out common errors in the training, and to offer some suggestions which may assist in the improvement of bayonet fighting in the army in India.

Bayonet fighting is classified into two parts:--

(a) Competition or individual fighting.

(b) The practical use of the bayonet in action.

Until recently the importance of the latter was but scantily noticed even officially. A very small space was allotted to it in "Instruction in bayonet fighting" under the heading of "The practical use of the bayonet", but no definite instruction was laid down, with the result that the training was carried out in a most elementary manner in some units, and in others was practically ignored.

This defect in the training was quickly recognised in India, and the importance of the practical use of the bayonet was impressed on all, and from the few practical hints given at the end of the "Instructions" a system was evolved, which was taught to all officers and non-commissioned officers undergoing courses of training at the Central Gymnasias. They, in their turn, introduced the system into their units on the completion of the course, with the result that very much more interest in practical bayonet fighting is taken now than formerly, though the standard of efficiency is still low.

This interest should now become more universal, as a complete course of instruction in the use of the bayonet in action has been recently laid down in Appendix I, Infantry Training, and "Instruction in bayonet fighting" has been changed to "Instruction in bayonet fighting for competitions." This point should be noted, as from the result of frequent inspections, it has been found that the distinction is sometimes not generally understood, and confusion in the instruction follows.

Competition fighting is entirely distinct from the practical use of the bayonet. It is very doubtful whether on service an actual individual fight would ever take place. There is no time or space to manœuvre for an opening, as such movements as "retiring by jump," "draw for time thrust," "extra parry" could never be carried out. Further, there is no time available for the instruction of a whole unit in individual fighting; the lessons are numerous, intricate, and difficult, and, rather than encouraging the desire to "close" with an opponent, they have a tendency to teach men to deliver a rapid attack, and then to retire out of their adversary's reach as quickly as possible.

No doubt individual fighting is excellent training for the brain and eye, and for activity, agility, and the attainment of strength, and is a very suitable form of recreation for a soldier: but bad habits, such as the employment of the "throw point", anxiety to keep out

of an opponent's reach, etc., are acquired, and are most difficult to eradicate. The use of the "throw" point, if attacking an opponent on the move, generally results in loss of control over the weapon, and causes the attacker to circle round his opponent when delivering the point, instead of going into him.

These faults are bad training for bayonet fighting in the field, though quite in accordance with the instruction for competition fighting. It must be remembered, however, that the soldier's training should be first and foremost for war, and all peace instruction should aim at efficiency in the field.

Against this, it must be admitted that a good individual fighter acquires confidence, and in "Instruction in bayonet fighting for competitions," great stress is laid on the importance of attacking vigorously, which is the essence of the practical use of the bayonet. But though in war the attack is made vigorously, by charging into an opponent, in individual competition fighting this is not the case; indeed the rules for assaults-at-arms enjoin a referee to stop a "phase" if the combatants come to such close quarters that the bout is liable to become a wrestling or pushing match. This is hardly fostering the spirit of closing with an opponent at all costs, and disabling him by any means, which would be necessary in war. It is doubtful therefore whether individual competition fighting is of any great value for war training.

The disadvantages above-named are recognised in the first paragraph of "Instruction in bayonet fighting for competitions," but "the impossibility of drawing up a system of fighting suitable only for the actual combat that contains sufficient variety to ensure the required handiness and sufficient interest to encourage men to practise it" could surely be overcome? For the past three years in India bayonet team competitions have been held at assaults-at-arms under rules practically similar to the instruction recently laid down in Lessons VII and VIII of Appendix I, Infantry Training. These competitions are always keenly contested. The system of instruction laid down in India (mentioned on page 36) before the publication of the Infantry Training, 1911, was introduced with a view to teaching men to fight more or less as they would on service, *i.e.*, "charging," "meeting one another on the move," etc., and the rules for team competitions at assaults-at-arms were framed on similar lines. The result is that the men have become more handy, and the competitions have aroused quite sufficient interest for units to train teams to take part, thereby fulfilling a double duty, *i.e.*, training men of regiments to fight practically in the field and producing a system of fighting at competitions very similar to the method of fighting on service and "which contains sufficient variety, etc., to encourage men to practise it."

The introduction of fixed rules and lessons for the use of the bayonet on service is a great advance, and should prove of value in improving the efficiency of the army in this important branch of the soldier's training.

**Practical use of the bayonet.**

The lessons are simple, easy to understand, and throughout encourage the desire to close with an opponent. This desire is bound to foster courage and determination, and the necessity of keeping one's head and temper is obvious to anyone who has practised the "Assaulting Lesson" and the "Assault" in the Infantry Training. Courage is essential, as hard knocks are given and received; determination is necessary, as a half-hearted attack always ends in failure; the men must keep their heads in order to seize the opportunity for "tripping," "using the butt," or fighting with "shortened arms"; loss of temper would result most probably in serious injury and cannot be entertained for a moment in peace training.

These points all emphasise the importance of the introduction of a fixed system of instruction in the use of the bayonet in action, but might not this instruction be still further improved? So far as it goes it is excellent, but beyond mentioning the "countercharge", nothing is said in Appendix I of the necessity of practising the assault and defence of trenches.

As regards the assault of trenches, it is easy for men who have not undergone the strain and fatigue of an attack, to run 15 paces (2 men 30 paces apart—Lesson VIII) and engage one another, but it is very different, when worn out by many hours fighting, to rush forward 100 or 200 yards, possibly over obstacles or rough ground, and fight hand to hand.

As regards the defence of trenches, it is important for officers and men to practise getting out of trenches quickly and to know when to cease firing and make the countercharge.

From a perusal of "Instruction in bayonet fighting for competitions" it may be assumed that individual fighting need only be taught to men who are entering for individual fighting competitions, or to men who show a special aptitude for it, or who are desirous of receiving instruction. In other words, it is for the selected few and not for the majority of men in a unit. A few remarks, therefore, on the instruction will be sufficient.

The first point requiring notice is the position of "on guard." The detail for this states that "the rifle should be held well forward and covering the left side, left arm slightly bent, the right hand rather in front of the body." Now experience shows that these are the points which are almost invariably neglected.

The reasons for the positions are obvious. The rifle should be held well forward, as the opponent is thereby kept further away; the left side should be covered, as it is the most vulnerable, the tendency in nearly every case being, when parrying to the left, to draw the left arm downwards and backwards, thereby exposing, rather than defending, the left side; the left arm should be slightly bent, so that in parrying it can be straightened and a forward movement given to the parry, thereby clearing the attack by a very slight motion, and at the same time, by this forward movement, practically commencing the "return" point without any pause; the right hand

**Instruction in the use of the bayonet in individual Competition Fighting.**

rather in front of the body, as this again brings the point of the bayonet nearer to the opponent, thus keeping him further away, and it is a more threatening position than if the hand is drawn back.

The failure to comply with these points, which are laid down in the detail for the position of "on guard," and emphasised in the note following the detail, is very common, and consequently men from the very commencement adopt a bad position and become indifferent performers, whereas with a little care in the beginning of their instruction they might attain to a very fair standard of proficiency.

The next remark is with reference to the note at the foot of the detail for the "parries." "Great care should be taken that the rifle is moved by the arms alone, working free of the body." Now this is a most important point, and yet even with men trained at the Central Gymnasia, after four months' instruction, it is such a common fault, that it requires explanation. The reason is explained in the last three lines. "In other words the body should not be thrown out of its normal position facing the adversary by following the movement of the rifle." This is so plain that an apology is almost needed for mentioning it, but even with trained instructors, the question as to why the rifle should be moved by the arms alone, working free of the body, appears to offer such difficulties, and receives such varied replies, that an explanation must be given.

Now if the right hand is kept close to the body, it follows that a wide parry must be made, the whole of the body swings round in the direction of the parry, and the eyes instinctively follow the point of the bayonet. The result of these faults is that the body is thrown out of its normal position facing the adversary by following the point of the bayonet, the whole of the side of the body opposite to the direction in which the parry is made is exposed, and a quick "return" is impossible, as the point has to be brought right round to "return" on the adversary, with consequent incorrect direction of aim.

"Wall-pad lessons should be practised frequently even by skilled fighters." (Paragraph 3, Instruction in Bayonet Fighting for Competitions).

**Wall-pad lessons.** This is most important but is seldom carried out. The value of 5 minutes wall-pad lesson daily is very great, and should be practised invariably by any one entering for an individual competition. The result is well worth the time spent on the work. As no fixed detail is laid down for wall-pad lessons, the following progressive movements are suggested:—

#### *Lesson IV.*

- |               |   |                             |
|---------------|---|-----------------------------|
| Dummy Rifles. | { | (a) Prove distance.         |
|               |   | (b) First point.            |
|               |   | (c) Throw point.            |
|               |   | (d) First point with lunge. |
|               |   | (e) Throw point with lunge. |

*Lesson VI.*—(Same as Lesson IV with following additions):—

- Spring bayonets. {
- (f) First point and retire by jump—  
Command, "Point."
  - (g) Throw point and retire by jump—  
Command, "Point."
  - (h) Advance and make 1st point with  
lunge—Command, "Advance."
  - (i) Advance and make "throw point" with  
lunge—Command, "Advance".
  - (k) Advance, make "throw point" with  
lunge and retire by jump—Com-  
mand "Advance".

*N.B.*—When retiring after making a point, it is useful to make some parry, either right or left or high or low. This teaches the attacker to parry instinctively if his attack fails.

The method of instruction in Lesson X should be noted. In this lesson the "disengage" and "feint" are explained and illustrated by the instructor, with the help of an assistant. The actual motions themselves are not performed by the pupil.

The instruction therefore in Lessons XI and XII is suggested as being carried out as follows:—

#### *Lesson XI.*

The pupil has only seen the "disengage" and "feint" made by the instructor and an assistant; this lesson therefore should be taught in three stages.

*1st Stage.*—Instructor shows an opening and says "feint."

Pupil feints and remains steady.

(Instructor to see that the pupil feints correctly.)

Instructor says "on guard."

*2nd Stage.*—Instructor shows an opening and says "here"

Pupil feints and disengages and remains steady.

Instructor answers pupil's feint with a parry.

(Instructor to see that pupil disengages correctly.)

Instructor says "on guard."

*N.B.*—The first two stages are really Lesson X and are to teach the pupil himself to make (a) the "feint," (b) the "disengage," (c) the "feint" and "disengage" combined.

*3rd Stage.*—Instructor shows an opening and says "here."

Pupil feints, disengages and delivers the throw point, hitting the instructor.

The instructor answers the pupil's feint with a parry.

Instructor says "on guard."

*Lesson XII.*

**1st Stage.**—Pupil shows an opening.

Instructor says "parry", then feints and disengages.

Pupil makes partial parry and remains steady.

**2nd Stage**—(continued from 1st Stage).

A partial parry having already been made by the pupil.

Instructor says "parry" and threatens pupil with a point.

Pupil parries the threatened attack and remains steady.

*N.B.*—Instructor should see that the pupil does not make a wide "partial parry" or "parry."

**3rd Stage**—(continued from 2nd Stage).

The pupil has parried instructor's point.

Instructor says "here."

Pupil delivers first point, hitting instructor.

When the pupil can form the "partial parry," and "parry" correctly, *i.e.*, just sufficiently wide to take off the attack, he should be made to combine the first two stages on the instructor's word "parry," and when he can combine the first two stages well enough, he will combine the whole three stages on the instructor's word "here."

In none of the lessons should an instructor tell the pupil what he himself is going to do. The reason is that the pupil, at the end of a long explanation, is so confused that he does not know whether he or the instructor is to attack or whether he or the instructor is to parry. It is for this reason and with the object of simplifying the instruction that Lessons XI and XII are divided into stages.

A frequent omission in all the lessons in individual bayonet fighting is teaching the pupil to attack or parry in one line only. There are four openings, *i.e.*, right, left, high and low, and the pupil must be taught to attack and parry in each opening. This is seldom done, with the result that the men are quite unprepared to attack or parry except in one opening.

'To ensure individual instruction it is desirable that not more than four pupils should be given to each instructor.' (Paragraph 2, Appendix I, Infantry Training.)

**Instruction in the practical use of the bayonet.**

"All non-commissioned officers will be instructed in the method of giving the Bayonet Fighting lessons." (Para. 10 (3), Appendix I, Infantry Training.)

Both the above are very important paragraphs. Under the certificated non-commissioned officers, all company non-commissioned officers should undergo a course of instruction. Universal instruction can then be carried out under company arrangements, each non-commissioned officer taking four men at a time, whenever available,



and putting them through one or two lessons. This will only take a few minutes, and as the men become more proficient, each man of the group of four can take the other three under the supervision of the non-commissioned officer. If all company non-commissioned officers are competent to instruct, a few minutes daily, when a company is doing company training or, in the case of British units, in addition when doing their annual course of physical training, it would greatly improve the efficiency of the men in the practical use of the bayonet. The instruction should always be considered as a recreation and not as a drill.

The great and almost insuperable objection to universal training in bayonet fighting in a unit is the totally inadequate supply of equipment allowed. This is admitted, but, at the same time, cannot more be done with the service rifle and bayonet? For instance, the position of "on guard," "point," "parries," and pointing at wall-pads or bags or dummies, can all be taught with the service rifle, which is preferable to the "musket fencing" as it is the weapon that will be actually used on service, whereas the "musket fencing" differs in length and weight from the service rifle. "Shorten arms," "use of the butt" and "tripping" can also be taught without "musket fencing" though of course the use of the latter simplifies the instruction. It should be noted that with the service rifle, in order to avoid damaging the rifles when teaching the parries, the instructor should use a bamboo stick or pole.

While mentioning the position of "on guard," it might be remarked that at the headquarters gymnasium at Aldershot, the position is taught with the legs practically straight, and not as shown in the diagram. This rather conforms to the detail, *i.e.*, "the legs in a natural position such as a man walking might adopt on coming into collision with an advancing enemy." It must be remembered, that the principle underlying the whole of the instruction in the practical use of the bayonet is for a man not to stop in front of an opponent but to get right into him. The adoption of the bent knee position tends rather to make a man stop. The above remarks are worth noting, but of course all men are not alike and the position of "on guard," adopted by each man must be such as to suit his own requirements, provided the general principles laid down in the detail are adhered to.

The notes made on the "parries" in the individual instruction for competition bayonet fighting apply equally to practical use. The "parries" should be taught from any position.

It was mentioned previously that the instruction in the practical use of the bayonet might go further than is at present laid down. Before offering suggestions on this point it is necessary to say what instruction was carried out in India before the publication of Appendix I, Infantry Training. The instruction was as follows.

After the men had been taught the lessons laid down in "Instruction in bayonet fighting," they were then taught the

practical use of the bayonet progressively under the following system:—

- (a) *Charging on flat ground*.—One man attacked from a distance of about 30 paces. Another man received the attack at the halt. The man on the defensive had to parry and return. The men then changed round.
- (b) *Charging on flat ground*.—As in (a), but 2 men, at about 5 paces one behind the other, attacking one man at the halt. The first object was to teach the leading man attacking to go straight into his opponent and bayonet him or, if unsuccessful, to him knock down or throw him off his balance so that the rear rank man could bayonet him. The second object was to teach the defender to parry and return quickly, and be prepared to take on another opponent at once. It might appear an easy matter to induce a man to charge right into his opponent, but, on the contrary, it is most difficult, and until confidence is acquired, the attacker invariably shirks and swings round his opponent, thereby offering an easy target to the man on the defensive, provided the latter keeps cool. It was therefore impressed on the attacker from the very commencement that the straighter and harder he went into his man the less chance he had of being bayoneted himself.
- (c) *Charging on flat ground*.—Procedure as in (b), but one man attacking two men on the defensive, a few paces behind one another. The object was to teach a man to go straight on to another opponent if he is not touched himself, or if he has either missed or bayoneted the first man on the defensive.
- (d) *Charging on flat ground*.—As in (a), (b), (c), but two men attacking and two men on the defensive, in each case behind each other, about 3 or 4 paces. The object of this was a further progression in the instruction, and to teach the rear rank man attacking to leave the first defender alone, if his front rank man bayoneted him, and make for rear rank defender. Further, to teach the rear rank on the defensive to turn any mistake made by the attackers to his own advantage. For instance, supposing the front rank attacker made the "throw point" and missed, his weapon would be dragging along the ground, and this would be the moment for the rear rank defender to bayonet him if his front rank man had not already done so. Again, both attackers might go for the front rank defender together; the rear rank defender was taught then to run forward and bayonet one or other of them, and if possible both. In other words "mutual support."
- (e) *Charging on flat ground*.—Two men about 30 paces apart rushed forward towards one another and assaulted.

This was intended as preliminary instruction for the countercharge.

- (f) *Assault and defence of trenches.*—Men drawn up 100 or 150 paces away from trenches defended by other men, and instruction given how to assault and how to defend the trench.

Regarding (a), (b), (c), (d), it may be said that it is wrong to teach men to receive an attack at the halt. It must be remembered, however, that they have to keep their heads and remain cool, which are very admirable qualities in a soldier. Awaiting the attack of charging men most certainly develops these qualities, and gives the men complete confidence in themselves, not to mention developing courage; it also teaches them to "parry and return" and is a progressive step to the *mêlée*, which will occur in a countercharge in which quick parrying and returning should prove extremely useful; (a) is to all intents and purposes similar to the lessons in Infantry Training; (b), (c), (d) are further progression in these lessons, and (e) is exactly similar.

Let us now discuss the defence and attack of trenches. What are the methods of defending a trench with the bayonet?

**Defence of trenches.**

- (a) Remaining in the trench and awaiting the assault.

- (b) Countercharging.

The first is nearly always adopted by men who are told at bayonet fighting inspections to act as they would on service, and who frequently have received very little instruction in the practical use of the bayonet. It may therefore be accepted as the natural instinct, and rather emphasises the necessity for practice in the defence of trenches. The adoption of this method is fatal. The men in the trench are at a complete disadvantage, as their opponents are above them, and their only defence is an upward point which is easily parried.

(b) is in accordance with all principles of defence, *i.e.*, to assume the offensive at the earliest possible moment, but as just mentioned above, to remain in a trench appears to be the natural instinct, and it is possible that it will be difficult to get men to leave their cover.

- (a) therefore may be taken as absolutely wrong.

(b) as the best means of restoring the *moral* of the defenders, should they show signs of wavering, or if their fire becomes wild or ineffective.

There is still one other method of defending a trench, which though at variance with the principles laid down in Appendix I, Infantry Training, is suggested, in certain circumstances, as being worthy of consideration. This method is as follows:—When the assault arrives about 20 or 30 yards from the trench, the defenders move back out of it and receive the assault just on the far side, thus placing an obstacle between themselves and the attackers, who, in order to get over the trench, are obliged to hold their rifles in one hand or get down into the trench, in both cases thereby placing themselves at a

great disadvantage. The method is only suggested as possibly being of some value in, say, the case of a surprise at dawn, when the enemy being so close before the alarm is given, the men cannot get out of the trench quick enough to make a countercharge and cannot fire. As shown before, to remain in the trench is fatal and therefore the defence of the trench on the defenders' side would appear to be the only alternative to a countercharge. In such a situation there would probably be a certain amount of confusion and counter-orders. Some officers might give the order to fire, others to charge, but if a fixed method of defence in such circumstances were adopted, a possible unity of action might result. It is therefore suggested that officers and men should occasionally practise this way of defending a trench, so as to know how to act if unable to countercharge. A practical illustration would at once show them the inadvisability of remaining in the trench, and would point out to them that, by getting out of it just on their own side, they gain an advantage, and might possibly be able to make a fight of it, which otherwise they could not do.

On page 38 above, attention was drawn to the difference between the instruction in Lesson VIII and an assault after a long attack. To minimise this difference to a certain extent, the following two methods of instruction are advocated:—

**Attack on trenches.** *Practice (a).*—All available equipment to be divided up amongst as many men as possible in a company, and the men divided into attackers and defenders, either in equal numbers, or more attackers than defenders, or more defenders than attackers.

The attackers are drawn up say 400 yards away from the defenders, who are in a trench. The attackers act as far as possible as if on service, and when they have arrived say 100 yards from the trench, they open rapid fire for a few minutes and then assault. The defenders meanwhile fire at their assailants, until the order to "charge" is given, when they rush out of the trench and engage the attackers with the bayonet. If possible the men should be trained to "play the game" and if hit by a point that would be really disabling, they should lie down. Officers should carry single sticks.

This method should teach the defenders the right moment to charge, for it is no good going out of the trenches too soon, as the advantage of fire is lost and it is almost worse to go out too late. In addition, the method accustoms men to get quickly out of trenches, which accordingly should be of various patterns. The latter point is rather important, and therefore a suitable time for carrying out this practice would be when the men are doing company training and are being instructed in digging trenches.

As regards the attackers, it teaches them to use the bayonet when moderately fatigued and out of breath, and for both attackers and defenders is progression on the instruction in Lesson VIII. Of course, a company carrying out this practice would have to use all the kit available in a unit.

practise bayonet fighting." But it is doubtful whether this point is not sometimes overlooked in units, and bayonet fighting regarded as of secondary importance.

This article, however, is not intended to point out the importance of men acquiring proficiency in the use of the bayonet, but rather to point out common errors in the training, and to offer some suggestions which may assist in the improvement of bayonet fighting in the army in India.

Bayonet fighting is classified into two parts:—

(1) Competition or individual fighting.

(2) The practical use of the bayonet in action.

Until recently the importance of the latter was but scantily noticed even officially. A very small space was allotted to it in "Instruction in bayonet fighting" under the heading of "The practical use of the bayonet," but no definite instruction was laid down, with the result that the training was carried out in a most elementary manner in some units, and in others was practically ignored.

This defect in the training was quickly recognised in India, and the importance of the practical use of the bayonet was impressed on all, and from the few practical hints given at the end of the "Instructions" a system was evolved, which was taught to all officers and non-commissioned officers undergoing courses of training at the Central Gymnasium. They, in their turn, introduced the system into their units on the completion of the course, with the result that very much more interest in practical bayonet fighting is taken now than formerly, though the standard of efficiency is still low.

This interest should now become more universal as a complete course of instruction in the use of the bayonet in action has been recently laid down in Appendix I, Infantry Training, and "Instruction in bayonet fighting" has been changed to "Instruction in bayonet fighting for competitions." This point should be noted, as from the result of frequent inspections, it has been found that the distinction is sometimes not generally understood, and confusion in the instruction follows.

Competition fighting is entirely distinct from the practical use of the bayonet. It is very doubtful whether **Individual Competition Fighting.** on service an actual individual fight would ever take place. There is no time or space to manoeuvre for an opening as such movements as "retreating by pump," "draw for time thrust," "extra parry" could never be carried out. Further, there is no time available for the instruction of a whole unit in individual fighting, the lessons are necessarily intricate, and difficult, and, rather than encouraging the desire to "close" with an opponent, they have a tendency to teach men to deliver a rapid attack, and then to retire out of their adversary's reach as quickly as possible.

No doubt individual fighting is excellent training for the brain and eye, and for activity, agility, and the attainment of strength, and is a very suitable form of recreation for a soldier, but bad habits, such as the employment of the "throw point," anxiety to keep out

of an opponent's reach, etc., are acquired, and are most difficult to eradicate. The use of the "throw" point, if attacking an opponent on the move, generally results in loss of control over the weapon, and causes the attacker to circle round his opponent when delivering the point, instead of going into him.

These faults are bad training for bayonet fighting in the field, though quite in accordance with the instruction for competition fighting. It must be remembered, however, that the soldier's training should be first and foremost for war, and all peace instruction should aim at efficiency in the field.

Against this, it must be admitted that a good individual fighter acquires confidence, and in "Instruction in bayonet fighting for competitions," great stress is laid on the importance of attacking vigorously, which is the essence of the practical use of the bayonet. But though in war the attack is made vigorously, by charging into an opponent, in individual competition fighting this is not the case; indeed the rules for assaults-at-arms enjoin a referee to stop a "phase" if the combatants come to such close quarters that the bout is liable to become a wrestling or pushing match. This is hardly fostering the spirit of closing with an opponent at all costs, and disabling him by any means, which would be necessary in war. It is doubtful therefore whether individual competition fighting is of any great value for war training.

The disadvantages above-named are recognised in the first paragraph of "Instruction in bayonet fighting for competitions," but "the impossibility of drawing up a system of fighting suitable only for the actual combat that contains sufficient variety to ensure the required handiness and sufficient interest to encourage men to practise it" could surely be overcome? For the past three years in India bayonet team competitions have been held at assaults-at-arms under rules practically similar to the instruction recently laid down in Lessons VII and VIII of Appendix I, Infantry Training. These competitions are always keenly contested. The system of instruction laid down in India (mentioned on page 36) before the publication of the Infantry Training, 1911, was introduced with a view to teaching men to fight more or less as they would on service, *i.e.*, "charging," "meeting one another on the move," etc., and the rules for team competitions at assaults-at-arms were framed on similar lines. The result is that the men have become more handy, and the competitions have aroused quite sufficient interest for units to train teams to take part, thereby fulfilling a double duty, *i.e.*, training men of regiments to fight practically in the field and producing a system of fighting at competitions very similar to the method of fighting on service and "which contains sufficient variety, etc., to encourage men to practise it."

The introduction of fixed rules and lessons for the use of the bayonet on service is a great advance, and should prove of value in improving the efficiency of the army in this important branch of the soldier's training.

**Practical use of the bayonet.**

*Practice (b).—*Every company, on completion of the obstacle course in drill order with service rifle, to assault a trench, with dummies placed so as to represent the countercharge. The procedure would be as follows —

Each section of fours, fives, sixes, etc. (according to the width of the course) on completion of the course, lies down and fixes bayonets about 100 yards or any convenient distance away from the trench.

When the whole company is formed up in one (or two) lines, the men double forward with fixed arms, and when near the dummies rush forward and assault, continuing the rush over the trench, rallying, and opening fire on the far side.

In order to teach the men to point straight, the dummies might have bulls-eyes on them, on different parts of the body, and each man should put his point into the dummy on the bull's-eye. This would to a certain extent, represent the "opening" which an opponent might give.

This practice minimises the difference between two men doubling forward a short distance and meeting one another and the actual conditions of an assault, as the men have run, say,  $\frac{1}{2}$  a mile and have surmounted obstacles, thus assaulting when out of breath and fairly fatigued. As in practice (c) the trenches should vary in pattern.

The instruction is perhaps a little unrealistic, as it will be noticed that the men cannot fire before assaulting, as the dummies are in front of the trench, which would not be the case in a real attack until the assault had commenced and the countercharge had been made. But, at the same time, it should result in teaching men to point straight on the move, and to get over various patterns of trench and rally on the far side, and is a fitting conclusion to obstacle course training.

To return a moment to the lessons in the Infantry Training

#### General suggestions on Lessons.

We have seen that the very much, actually laid down for doing the trench box is the countercharge. All the lessons in the Infantry Training progressively lead up to this, culminating in the assault Lesson VIII. But in this lesson only two pupils are opposed to one another. Now in the countercharge the men making it will be in a thick mass of first in line, and it is therefore suggested that in Lessons VII and VIII, the same progression as practised in India should be introduced, i.e., attacking first with one, then two or three men should oppose two or three men, and so on. The result is a mêlée, which is what would actually occur when men are forced to attack, and to be prepared to be attacked from all directions. And this again seems so important to attack and to be attacked, to parry and to retaliate, that the first lessons, i.e., the two opposing sides meet in the countercharge, then may be training to all intents and purposes at the bayonet.

In Lesson VII A — First Lesson, what happens is that one man attacks, the other man parries, both sides meet and they go up

in the air and the attacker is past his opponent before the latter can touch him, but would himself be bayoneted by a rear rank defender. Now if there was another man behind the attacker while this was going on, the man parrying would find himself bayoneted by the rear rank attacker, or if the front rank attacker closed right into his opponent as he should do, thus clearing the way for his rear rank man, the rear rank man would easily bayonet the first defender. This would soon teach the men to parry and return quickly and get ready for another attack, and also would teach the front rank attacker to charge right home into his opponent.

The last point to be mentioned is the second stage of Lesson VIII. What would happen on service? Directly a man is hit with the point of the bayonet he would drop and stop fighting. By this, it is not meant that he would stop for a touch, but for a disabling wound. The idea of the lesson is to make men parry, return, and attack vigorously. Instead, what usually happens is that they continue jaggig at one another without any attempt at parrying. It is therefore suggested, in order to stop this, that after the words "vigorously assaulting one another," the following words should be added, "until one or other is hit, when he must acknowledge."

Against this it may be argued that men cannot be taught to "acknowledge," but it is merely a matter of practice, and if introduced into Lesson VIII, would only cause men to do what they actually would do if disabled with a real bayonet, *i.e.*, stop fighting.

In conclusion, I would point out that the ideas contained in this paper are for consideration only; they are founded on practical experience of what is seen at inspections, and at examinations of officers and non-commissioned officers undergoing special courses of instructions at Central Gymnasias, and it is hoped therefore that some of them may possibly prove of value in the improvement generally of bayonet fighting.

It need hardly be mentioned that tripping, using the butt, etc., must necessarily take the form of instruction only. It would of course be impossible to allow the men really to employ these methods at, say, assaults-at-arms or in the lessons in the practical use of the bayonet, but they can be explained to them so that they will know what to do, should they ever be called upon to fight hand to hand on service.

NOTE I.—Since writing above, the Lessons in Appendix I Infantry Training have been revised by the Inspector of Gymnasias, Aldershot. The chief points to notice in the revision are—

- (a) the impossibility of employing all the "openings" in some of the "Lessons";
- (b) the stress laid on the importance of making a good "point" before the quick withdrawal and the necessity of making the pupil realise that after "fixing" his point he will probably have to use considerable force before withdrawing it, and the method of illustrating this;
- (c) the cancelling of Lesson VIII and the awarding of the fight to the pupil who gets in the first hit, also permitting the pupils to show that they have an opponent at their mercy by threatening with the "butt," etc.;



*Practice (b).—*Every company, on completion of the obstacle course in drill order with service rifle, to assault a trench, with dummies placed so as to represent the countercharge. The procedure would be follows —

Each section of fours, fives, sixes, etc. (according to the width of the course) on completion of the course, lies down and fixes bayonets about 100 yards or any convenient distance away from the trench.

When the whole company is formed up in one (or two) lines, the men double forward with sloped arms, and when near the dummies rush forward and assault, continuing the rush over the trench, rallying, and opening fire on the far side.

In order to teach the men to point straight, the dummies might have bulls-eyes on them, on different parts of the body, and each man should put his point into the dummy on the bulls-eye. This would, to a certain extent, represent the "opening" which an opponent might give.

This practice minimises the difference between two men doubling forward a short distance and meeting one another and the actual conditions of an assault, as the men have run say  $\frac{1}{2}$  a mile and have surmounted obstacles, thus assaulting when out of breath and fairly fatigued. As in practice (a) the trenches should vary in pattern.

The instruction is perhaps a little unrealistic, as it will be noticed that the men cannot fire before assaulting, as the dummies are in front of the trench, which would not be the case in a real attack until the assault had commenced and the countercharge had been made. But, at the same time, it should result in teaching men to point straight on the move, and to get over various patterns of trench and rally on the far side, and is a fitting conclusion to obstacle course training.

To return a moment to the lessons in the Infantry Training

#### General suggestions on Lessons.

We have seen that the only method actually laid down for dealing with trenches is the countercharge. All the lessons in the Infantry Training progressively lead up to this, culminating in the assault Lesson VIII. But in this lesson only two papers are opposed to one another. Now in the countercharge the men making it will be in a thick mass and not in line, and it is therefore suggested that in Lessons VII and VIII, the same progress may be practised on India should be introduced, i.e., at a little distance from two or three men should oppose two or three others, and the result is a mêlée, which is what would actually occur and men are forced to attack, and to be prepared to be attacked from all directions. And this again sets up to another rule, i.e., that a soldier is to parry and retreat quickly at the first sign of an attack, thus opposing sides meet in the countercharge, then men will be fighting to all intents and purposes at the bayonet.

In Lesson VII A, during Lesson what happens when one man attacks, the other man parries, both rifles meet and the enemy group

in the air; and the attacker is past his opponent before the latter can touch him, but would himself be bayoneted by a rear rank defender. Now if there was another man behind the attacker while this was going on, the man parrying would find himself bayoneted by the rear rank attacker, or if the front rank attacker closed right into his opponent as he should do, thus clearing the way for his rear rank man, the rear rank man would easily bayonet the first defender. This would soon teach the men to parry and return quickly and get ready for another attack, and also would teach the front rank attacker to charge right home into his opponent.

The last point to be mentioned is the second stage of Lesson VIII. What would happen on service? Directly a man is hit with the point of the bayonet he would drop and stop fighting. By this, it is not meant that he would stop for a touch, but for a disabling wound. The idea of the lesson is to make men parry, return, and attack vigorously. Instead, what usually happens is that they continue jaggng at one another without any attempt at parrying. It is therefore suggested, in order to stop this, that after the words "vigorously assaulting one another," the following words should be added, "until one or other is hit, when he must acknowledge."

Against this it may be argued that men cannot be taught to "acknowledge," but it is merely a matter of practice, and if introduced into Lesson VIII, would only cause men to do what they actually would do if disabled with a real bayonet, *i.e.*, stop fighting.

In conclusion, I would point out that the ideas contained in this paper are for consideration only; they are founded on practical experience of what is seen at inspections, and at examinations of officers and non-commissioned officers undergoing special courses of instructions at Central Gymnasias, and it is hoped therefore that some of them may possibly prove of value in the improvement generally of bayonet fighting.

It need hardly be mentioned that tripping, using the butt, etc., must necessarily take the form of instruction only. It would of course be impossible to allow the men really to employ these methods at, say, assaults-at-arms or in the lessons in the practical use of the bayonet, but they can be explained to them so that they will know what to do, should they ever be called upon to fight hand to hand on service.

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NOTE II.—The reports of the various engagements in the Turko-Balkan States War all agree as to the important part that the bayonet has played throughout, and show what can be done by men determined to "close" with their adversaries. Our men are improving in "closing" but once they have closed, there is a marked display of ignorance as to how to disable their opponents. I am frequently told that the men will know what to do when their blood is up, etc. I can only reply by saying that at wrestling, or boxing, or any other game, the man with the knowledge and skill will invariably defeat the unskilled man, and so it will be in the field with the bayonet. Surely it is worth while teaching men what to do when once they have closed instead of deluding ourselves with false ideas that it will be all right on the day, and of allowing men to remain untrained in the use of the bayonet. In reply to the ever present excuse of "no equipment," I again say that much instruction can be given with the service rifle and bayonet, but it must be carried out by company N.C.O.s. and individual instruction given in squads of not more than four men.

## THE OPERATIONS IN NORTHERN VIRGINIA DURING AUGUST 1862.

BY CAPTAIN D. M. PATRICKSON, 86TH CARNATIC INFANTRY.

When McClellan, after his failure to seize the opportunities offered him at Malvern Hill, fell back on the 3rd July to his new base at Harrison's Landing on the James, bringing to a close active operations in the Yorktown Peninsula; he did so with an army thoroughly disorganized and dispirited, and whose effective strength had been reduced by casualties and sickness to about 75,000 men. The position, however, was a very strong one, and Lee, recognising that an assault could not hope to succeed, withdrew his forces, some 65,000 strong, to Richmond, leaving Stuart and the cavalry to observe McClellan.

Pope had by this time concentrated the three corps of Frémont, Banks, and McDowell east of the Blue Ridge, and was holding the gaps. The strength of this force was about 47,000, less King's division detached to Fredericksburg; and it formed a dangerous menace to the Virginia Central Railway, the chief line of supply of the Confederates.

Pope's objectives were:—

1. To guard Washington.
2. To secure the Shenandoah Valley.
3. To create a diversion in favour of McClellan by threatening the Confederate lines of communication at Gordonsville.

Lee, however, in appreciating the situation had, besides warding off the threat against his communications, to consider the possibilities of McClellan being reinforced by sea. Temporarily it was evident that the army of the Potomac was incapable of manœuvre, and Lee, recognising this, despatched Jackson with two divisions (11,000) to anticipate Pope at Gordonsville, which, thanks to Pope's dilatory movements, he successfully accomplished. Lee, moreover, hoped this move would once again intimidate the Federal Government, and by playing on their fears for the safety of Washington, as in the previous Valley campaign, would not only prevent McClellan from being reinforced, but might even lead to his withdrawal. That this withdrawal was actually brought about must be largely attributed to Lee's keen insight.

During the whole of July, McClellan remained inactive. He was desirous of cutting the Confederate lines of communication south of Richmond, and with this object had asked for a reinforcement of 20,000 men. He had, however, destroyed his scheme by telling Halleck, Lincoln's Chief of the Staff, that Lee had 200,000 men. If this was so, it was plain McClellan's plan must fail.

Halleck knew very well that Lee had not half that number, but being against the scheme, he gladly seized the excuse for refusing. Meanwhile Lee had sent A. P. Hill's division and the cavalry to Jackson. On 1st August Pope prepared to assume a vigorous offensive, having as objective the seizure of Gordonsville and Charlottesville. About the same time McClellan was ordered to embark his army at Fort Monroe and sail to Aquia Creek. From there he was to join Pope on the Rappahannock river, a dangerous and lengthy operation.

It will be seen then that the Confederates were now in possession of interior lines and had two courses open to them :

1. To contain Pope, and attack McClellan as he evacuated his position at Harrison's Landing.
2. To ignore McClellan and concentrate against Pope before he was reinforced.

On August 6th, Pope began his advance. Banks pushed forward a brigade to Culpeper Court House, the Federal pickets actually reaching ten miles south of Culpeper. Meanwhile Pope's three corps, using separate roads, prepared to concentrate on Culpeper. With their roads widely separated, and with Banks too far forward, Jackson was now offered a chance of defeating Pope in detail.

On August 7th, Jackson advanced by side tracks to Orange Court House, Cavalry in contact. The following day for once Jackson's staff arrangements were at fault. In addition the day was extremely hot. Hancock advanced two miles and Ewell eight. This failure may also be attributed to Jackson's refusal to take his divisions and commanders into his plans. Confidence begets confidence, and in no respect did von Moltke differ from Napoleon more than in the way he invariably trusted his corps commanders. On this day Banks reached Culpeper. On the 9th Jackson marched before daylight. By noon he had crossed the Robertson river, and found the Federal under Banks holding Cedar Run, some seven miles south of Culpeper. Fierce fighting ensued, the Federals, though greatly outnumbered, offering a surprising resistance, and it was not till 3.000 men had been killed and darkness was supervening that the Confederates were in full possession of victory. Jackson pursued but was checked by Stuart and Ricketts who had come up. Next morning Stuart reported that Ewell's whole army had come up as Jackson, who at this stage had no intention of attacking a force stronger than his own, had crossed the Cedar Run. There he remained two days before Pope's attack.

On the 11th Jackson, having Kozak's division and joined Pope, withdrew to Gordonsville. The following day saw Pope advance to the Rappahannock, along the river side, and a further advance south-west. On the 13th the newly appointed Chief of the Staff at Washington telegraphed that Pope's immediate task was to remain on the defensive, that the army of the Potomac had joined him, ordered him to retreat to the north of the Rappahannock and on no account to attack, but to get his head attacked. The decision that

forbid Pope to embark on his advance beyond the Rapidan was absolutely sound, but even so Halleck failed fully to appreciate the situation. True he was hindered at the outset by his wrong assumption that Lee was more likely to attack McClellan than to concentrate against Pope. But by the 12th August he should have known his error. By allowing Pope to remain on the Rapidan instead of ordering him back at least to the Rappahannock, Halleck had placed an inferior force within striking distance of an enemy of boundless enterprise, who held interior lines. To accentuate the error Pope's tactical position was worse than the strategical.

Both Lee and Jackson saw instantly the chance which Pope's forward position offered. Lee was aware on the 13th that Burnside had left Aquia Creek to join Pope and that part of McClellan's army had already embarked. The situation was of decisive advantage only if turned to account promptly and with resolution. Lee at once moved the whole of his forces, with the exception of two divisions left to observe Harrison's Landing, to Gordonsville, while on the 15th Jackson's three divisions moved by a flank march to Pisgah Church. All these moves were unperceived by the Federals. It is known that if an enemy is watched so closely that no movement is unobserved, surprise is impossible. Yet the Federals, despite their great cavalry strength, had not only lost touch with Jackson, but were quite unaware that a force of 55—60,000 Confederates was now concentrated behind Clark's mountain within six miles of his most vulnerable point.

Pope's tactical position has already been alluded to. His left on Somerville Ford was very weak and in the air, the bulk of his army being massed on the right, several miles distant, astride the main Culpeper-Gordonsville road, and confronting in their imagination Jackson and Hill. His forces, however, were now well over 50,000 strong, as Burnside's two divisions under Reno had come up.

Lee's plans were rapidly made. Jackson and Longstreet were to cross the Rapidan east of Pope's left at dawn on the 18th and move on Culpeper, while Stuart and the cavalry, preceding this advance, would seize Rappahannock station, destroy the railway bridge, and then, wheeling to their left, would take their part in the pre-conceived battle in the vicinity of Culpeper.

The secret of war lies in the communications. A glance at the map will show how Pope's forward position on the Rapidan with his strength on his right placed his communications with Washington completely at Lee's mercy. Had this scheme not miscarried Pope's army must have been destroyed; taken as it would have been completely by surprise, and compelled to fight a force its superior in every way, which had placed itself astride its line of communication. But the absence of the cavalry owing to an inexplicit order, and Lee's reluctance to advance without it, upset the whole plan. As Henderson says: "the omission of a few words cost the Confederates dear." Whilst conciseness is desirable in orders, F. S. Regs., Pt. 1, Ch. 2, says such conciseness must be consistent with

This was intended as preliminary instruction for the countercharge.

- (*f*) *Assault and defence of trenches.*—Men drawn up 100 or 150 paces away from trenches defended by other men, and instruction given how to assault and how to defend the trench.

Regarding (*a*), (*b*), (*c*), (*d*), it may be said that it is wrong to teach men to receive an attack at the halt. It must be remembered, however, that they have to keep their heads and remain cool, which are very admirable qualities in a soldier. Awaiting the attack of charging men most certainly develops these qualities, and gives the men complete confidence in themselves, not to mention developing courage; it also teaches them to "parry and return" and is a progressive step to the melee, which will occur in a countercharge in which quick parrying and returning should prove extremely useful; (*a*) is to all intents and purposes similar to the lessons in Infantry Training; (*b*), (*c*), (*d*) are further progression in these lessons, and (*e*) is exactly similar.

Let us now discuss the defence and attack of trenches. What are the methods of defending a trench with the bayonet?

- (*a*) Remaining in the trench and awaiting the assault.  
(*b*) Countercharging

The first is nearly always adopted by men who are told at bayonet fighting inspections to act as they would on service, and who frequently have received very little instruction in the practical use of the bayonet. It may therefore be accepted as the natural instinct, and rather emphasises the necessity for practice in the defence of trenches. The adoption of this method is fatal. The men in the trench are at a complete disadvantage, as their opponents are above them, and their only defence is an upward point which is easily parried.

(*a*) is in accordance with all principles of defence, i.e., to assume the offensive at the earliest possible moment, but as just mentioned above, to remain in a trench appears to be the natural instinct, and it is possible that it will be difficult to get men to leave their cover.

(*a*) therefore may be taken as absolutely wrong.

(*b*) as the best means of restoring the *morale* of the defenders, should they show signs of wavering, or if their fire becomes wild or ineffective.

There is still one other method of defending a trench, which though at variance with the principles laid down in Appendix I, Infantry Training, is suggested, in certain circumstances, as being worthy of consideration. The method was as follows:—When the assault arrives about 20 or 30 yards from the trench, the defenders move back out of it and receive the assault just on the far side, thus placing an obstacle between themselves and the attackers, who, in order to get over the trench, are obliged to load their rifles in one hand or get down into the trench, in both cases thereby placing themselves at a

great disadvantage. The method is only suggested as possibly being of some value in, say, the case of a surprise at dawn, when the enemy being so close before the alarm is given, the men cannot get out of the trench quick enough to make a countercharge and cannot fire. As shown before, to remain in the trench is fatal and therefore the defence of the trench on the defenders' side would appear to be the only alternative to a countercharge. In such a situation there would probably be a certain amount of confusion and counter-orders. Some officers might give the order to fire, others to charge, but if a fixed method of defence in such circumstances were adopted, a possible unity of action might result. It is therefore suggested that officers and men should occasionally practise this way of defending a trench, so as to know how to act if unable to countercharge. A practical illustration would at once show them the inadvisability of remaining in the trench, and would point out to them that, by getting out of it just on their own side, they gain an advantage, and might possibly be able to make a fight of it, which otherwise they could not do.

On page 38 above, attention was drawn to the difference between the instruction in Lesson VIII and an assault after a long attack. To minimise this difference to a certain extent, the following two methods of instruction are advocated:—

**Attack on trenches.** *Practice (a).*—All available equipment to be divided up amongst as many men as possible in a company, and the men divided into attackers and defenders, either in equal numbers, or more attackers than defenders, or more defenders than attackers.

The attackers are drawn up say 400 yards away from the defenders, who are in a trench. The attackers act as far as possible as if on service, and when they have arrived say 100 yards from the trench, they open rapid fire for a few minutes and then assault. The defenders meanwhile fire at their assailants, until the order to "charge" is given, when they rush out of the trench and engage the attackers with the bayonet. If possible the men should be trained to "play the game" and if hit by a point that would be really disabling, they should lie down. Officers should carry single sticks.

This method should teach the defenders the right moment to charge, for it is no good going out of the trenches too soon, as the advantage of fire is lost and it is almost worse to go out too late. In addition, the method accustoms men to get quickly out of trenches, which accordingly should be of various patterns. The latter point is rather important, and therefore a suitable time for carrying out this practice would be when the men are doing company training and are being instructed in digging trenches.

As regards the attackers, it teaches them to use the bayonet when moderately fatigued and out of breath, and for both attackers and defenders is progression on the instruction in Lesson VIII. Of course, a company carrying out this practice would have to use all the kit available in a unit.



*Practice (b).*—Every company, on completion of the obstacle course in drill order with service rifle, to assault a trench, with dummies placed so as to represent the countercharge. The procedure would be follows:—

Each section of fours, fives, sixes, etc. (according to the width of the course), on completion of the course, lies down and fixes bayonets about 100 yards or any convenient distance away from the trench.

When the whole company is formed up in one (or two) lines, the men double forward with sloped arms, and when near the dummies rush forward and assault, continuing the rush over the trench, rallying, and opening fire on the far side.

In order to teach the men to point straight, the dummies might have bulls-eyes on them, on different parts of the body, and each man should put his point into the dummy on the bulls-eye. This would, to a certain extent, represent the "opening" which an opponent might give.

This practice minimises the difference between two men doubling forward a short distance and meeting one another and the actual conditions of an assault, as the men have run say  $\frac{1}{2}$  a mile and have surmounted obstacles, thus assaulting when out of breath and fairly fatigued. As in practice (a) the trenches should vary in pattern.

The instruction is perhaps a little unrealistic, as it will be noticed that the men cannot fire before assaulting, as the dummies are in front of the trench, which would not be the case in a real attack until the assault had commenced and the countercharge had been made. But, at the same time, it should result in teaching men to point straight on the move, and to get over various patterns of trench and rally on the far side, and is a fitting conclusion to obstacle course training.

To return a moment to the lessons in the Infantry Training.

**General suggestions on Lessons.** We have seen that the only method actually laid down for defending trenches is the countercharge. All the lessons in the Infantry Training progressively lead up to this, culminating in the assault—Lesson VIII. But in this lesson only two pupils are opposed to one another. Now in the countercharge, the men making it will be in a thick mass and not in line, and it is therefore suggested that in Lessons VII and VIII, the same progression as practised in India, should be introduced, i.e., after a little instruction, two or three men should oppose two or three other men. The result is a *mêlée*, which is what would actually occur, and men are forced to attack, and to be prepared to be attacked from all directions. And this again seems to point to another reason for teaching men to parry and return quickly at the halt, as, once the two opposing sides meet in the countercharge, the men will be fighting to all intents and purposes at the halt.

In Lesson VII, Assaulting Lesson, what happens is that one man attacks, the other man parries; both rifles meet and generally go up

in the air; and the attacker is past his opponent before the latter can touch him, but would himself be bayoneted by a rear rank defender. Now if there was another man behind the attacker while this was going on, the man parrying would find himself bayoneted by the rear rank attacker, or if the front rank attacker closed right into his opponent as he should do, thus clearing the way for his rear rank man, the rear rank man would easily bayonet the first defender. This would soon teach the men to parry and return quickly and get ready for another attack, and also would teach the front rank attacker to charge right home into his opponent.

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On the 11th, Jackson, hearing King's division had joined Pope, withdrew to Gordonsville. The following day saw Pope advance to the Rapidan, contemplating the offensive and a further advance south-west. But Halleck, the newly-appointed Chief of the Staff at Washington, recognising that Pope's correct rôle was to remain on the defensive until the army of the Potomac had joined him; ordered him to stand fast north of the Rapidan, and on no account to advance, but to fight hard if attacked. The decision that

forbid Pope to embark on his advance beyond the Rapidan was absolutely sound, but even so Halleck failed fully to appreciate the situation. True he was hindered at the outset by his wrong assumption that Lee was more likely to attack McClellan than to concentrate against Pope. But by the 12th August he should have known his error. By allowing Pope to remain on the Rapidan instead of ordering him back at least to the Rappahannock, Halleck had placed an inferior force within striking distance of an enemy of boundless enterprise, who held interior lines. To accentuate the error Pope's tactical position was worse than the strategical.

Both Lee and Jackson saw instantly the chance which Pope's forward position offered. Lee was aware on the 13th that Burnside had left Aquia Creek to join Pope and that part of McClellan's army had already embarked. The situation was of decisive advantage only if turned to account promptly and with resolution. Lee at once moved the whole of his forces, with the exception of two divisions left to observe Harrison's Landing, to Gordonsville, while on the 15th Jackson's three divisions moved by a flank march to Pisgah Church. All these moves were unperceived by the Federals. It is known that if an enemy is watched so closely that no movement is unobserved, surprise is impossible. Yet the Federals, despite their great cavalry strength, had not only lost touch with Jackson, but were quite unaware that a force of 55—60,000 Confederates was now concentrated behind Clark's mountain within six miles of his most vulnerable point.

Pope's tactical position has already been alluded to. His left on Somerville Ford was very weak and in the air, the bulk of his army being massed on the right, several miles distant, astride the main Culpeper-Gordonsville road, and confronting in their imagination Jackson and Hill. His forces, however, were now well over 50,000 strong, as Burnside's two divisions under Reno had come up.

Lee's plans were rapidly made. Jackson and Longstreet were to cross the Rapidan east of Pope's left at dawn on the 18th and move on Culpeper, while Stuart and the cavalry, preceding this advance, would seize Rappahannock station, destroy the railway bridge, and then, wheeling to their left, would take their part in the pre-conceived battle in the vicinity of Culpeper.

The secret of war lies in the communications. A glance at the map will show how Pope's forward position on the Rapidan with his strength on his right placed his communications with Washington completely at Lee's mercy. Had this scheme not miscarried Pope's army must have been destroyed; taken as it would have been completely by surprise, and compelled to fight a force its superior in every way, which had placed itself astride its line of communication. But the absence of the cavalry owing to an inexplicit order, and Lee's reluctance to advance without it, upset the whole plan. As Henderson says: "the omission of a few words cost the Confederates dear." Whilst conciseness is desirable in orders, F. S. Regs., Pt. 1, Ch. 2, says such conciseness must be consistent with

clearness; and clearness of expression and freedom from any possibility of misunderstanding is of the highest importance. Further, the news that Lee had joined Jackson was conveyed to Pope, owing to the unfortunate capture of a staff officer and his despatch book. Confirmation of this was forthcoming early on the 18th, and Pope, at last alive to his danger, set his army in retirement behind the Rappahannock, the movement being completed by the evening of the 19th. This movement was largely aided by weather conditions, for a heavy fog concealed all movement from view till the afternoon of the 19th, and it was only late on the 20th that the Confederates reached the south bank of the Rappahannock; the cavalry driving the last of the Federals across the river.

Between the 21st and the 24th, Jackson made an attempt to turn the Federal right, but owing to heavy rain and floods it failed. Stuart meanwhile raided Catlett's Station doing much damage and capturing Pope's despatch book; while Longstreet kept the enemy occupied in front. To the latter's demonstrations Pope paid little attention, and his movements continued to conform to those of Jackson. The Federals, whilst observing the principal crossings, and with a bridge head at Rappahannock Station by means of which Pope might cross and attack his enemy, had concentrated their main forces on the road running from Sulphur Springs through Warrenton to Gainesville. Longstreet, however, on the 24th, drove the enemy from the bridge head and burned the bridge. Jackson's retirement, after his failure to turn the Federal right, was assumed by Pope to mean an abandonment of all attempts on that flank; and his attention turned to his left. Meanwhile, however, the Confederate position was getting desperate. Time meant everything to them and nothing short of a decisive victory could help them. Pope's army had by now reached a strength of nearly 80,000. The Federals at Aquia Creek were only 35 miles away and were actually nearer Richmond than Lee's forces. Federal troops were also collecting at Washington, and within a few days Pope might have on the Rappahannock a force of some 150,000 men at his disposal. Lee could only muster 55,000 men, as the reinforcements Mr. Davis was sending him could not arrive in time.

Instant action was imperative, and only two possible lines of action presented themselves. They were:—

1. To attack Pope before McClellan joined him.
2. To retire.

To attack Pope seemed at the first glance impracticable. The Federals occupied a most favourable position. Their army was concentrated and reinforcements approaching. The right flank was well secured, for the fords at the Springs and Waterloo were held by Pope, and north of the Springs were the Bull Run Mountains, a range covered with dense forest and with few roads. McClellan's advance from Aquia Creek automatically gave protection to his left, though after Jackson's retirement this was the flank on which Pope apprehended most danger. As Henderson says, "Even the genius

of a Napoleon might have been baffled by the difficulties in the way of an attack."

A combination, such as Lee and Jackson formed, is seldom met with. The stern courage, the tactical brilliancy, the determination and self-confidence of Jackson, together with the instinctive way he fastened on to the enemy's weak points and played on his fears, formed an admirable supplement to Lee's strategical insight, clear judgment, and refusal to know defeat. The greater the danger, the heavier the responsibility, the more did Lee's great qualities as a commander shine forth, the greater his trust in his brilliant co-adjutor. How could the bombastic Pope hope to overcome such a combination? Yet, than the scheme now planned by Lee and Jackson, no more dangerous and daring operation has ever been devised. It was because Lee knew Pope that he considered the risk worth running.

Lee's decision involved the separation of his army into two wings under the very eyes of his enemy, and in readily accepting the burden of responsibility which such a decision necessarily imposed, Lee exhibited in a high degree one of the greatest qualities of a good leader. As Lord Vincent has said: "the test of a man's courage is responsibility."

His plan was as follows: Longstreet was to contain Pope, while Jackson would make a wide *detour* northwards through Thoroughfare Gap and strike at the great Federal dépôt and line of communication at Manassas junction. This, if successful, would compel the Federals to fall back, and then Longstreet could march to join Jackson and combine against Pope, whom they hoped would then be taken at a disadvantage. The plan is in many respects so similar to Wellesley's project for the battle of Assaye that the criticism made on that project by Colonel Bird in the April 1912 number of the *U. S. I. Journal*, seems particularly appropriate, with minor alterations. The project was undoubtedly hazardous, for separation of the two Confederate forces by a series of obstacles was contemplated. In war, however, decisive success is not gained without some risk of failure, and the extent of the danger which is incurred is measured not by the actual form of the operation but by the character and fighting value of the enemy. No just appreciation of the merits of a plan can, therefore, be made apart from the circumstances in which it was conceived and executed. In any case the object of a commander should be so to plan his operations that if successful the greatest advantage will be gained, irrespective of the consequences of possible failure. Each blow should therefore be so aimed and delivered that the enemy will be forced to parry it and to conform to the movements of the attacker, abandoning his own plans. This will be the case when the enemy's line of communication is in question. Do not the above lines, combined with Lee's estimate of Pope as a general, fully justify the undoubtedly enormous risks the project involved? Pope undoubtedly could by blocking Thoroughfare Gap and concentrating the necessary strength against Jackson, or by using his whole army against Longstreet,



defeat the Confederates in detail. The other course open to Pope, of retiring on Aquia Creek to combine with McClellan, was, as Lee knew from the captured despatches, entirely opposed to his orders to cover Washington, while he required the railway for his supplies.

Before dawn, on the 25th, Jackson set out on his march, having withdrawn unobserved from Sudley Springs the previous evening, and being replaced by Longstreet's division. The troops, in complete ignorance of what was intended, never marched better; and reached Salem after a 26-mile march at midnight, not a Federal having been seen. Dawn on the 26th found them once more pushing forward. Soon the Bull Run mountains became visible, giving the troops a clue to their destination and inspiring them to fresh effort. Through the Gap, on to Gainesville, where Stuart and the cavalry joined in, still not a sign of a Federal; not a movement reported from Warrenton. Never did a single factor in the situation escape Jackson's notice. Realising that Pope could rapidly rail forces to Manassas from Warrenton, he directed his march on Bristowe Station, some seven miles south of the junction and where the railway crossed the Broad Run river. The afternoon was far advanced before Bristowe was reached. The station fell an easy prey to Ewell; the bridge was destroyed and the line torn up, but two trains managed to escape in time. It was now dark, but the junction had to be seized before reinforcements could arrive from Alexandria. Stuart was accordingly despatched with two regiments, and by midnight Manassas junction was in possession of the confederates with all its accumulation of stores. The next day Hill and Taliaferro's divisions moved to Manassas, leaving Ewell on the Broad Run to resist any attempt at relief from the south. Meanwhile what was happening on the Rappahannock?

Pope had actually known, on the 25th, of Jackson's march, and had jumped to the conclusion that he was making for the Shenandoah Valley. He issued orders for the Rappahannock to be crossed on the 26th at Sulphur Springs and information as to the enemy's move definitely obtained. A whole day was thus wasted, nor were these orders ever carried out. McDowell did make an effort to comply, but as Anderson's force was at the Springs, where it had replaced Longstreet's force by then *en route* to join Jackson, little was discovered. Reno, who had been ordered to advance on Culpeper, did nothing.

By the night of the 26th, however, it became evident that Jackson was moving through Thoroughfare Gap. Pope and McDowell agreed that this portended a flank attack on Warrenton. A Federal concentration on a line running east and west through Warrenton was therefore ordered, with a reserve at Greenwich. Troops were coming up from the rear, and Pope saw no reason to apprehend danger in that direction: generals of far greater ability would never have pierced the real extent of Lee and Jackson's audacity. The news that Manassas was captured came as a disturbing factor to the Northerner's plans. Early on the 27th a Federal concentration was

ordered on Gainesville, a cavalry brigade was despatched to observe Longstreet, and Hooker was ordered to clear up the situation in front of Manassas, Pope still clinging to the idea that the movement on the junction had been merely a cavalry raid. These dispositions were excellent, placing as they did the Federals astride the line by which Jackson and Lee hoped to concentrate, and in a position of readiness where they could best await such information as Hooker and the cavalry might obtain. Hooker encountered Ewell at Bristowe station and brisk fighting ensued till evening when Ewell fell back on Manassas and rejoined Jackson. Manassas was now one vast conflagration, and Pope, who had been present towards the end of the engagement with Ewell, at last realised that it was Jackson's whole force that lay between him and Washington.

At this stage Pope lost his head. Hitherto his dispositions were well suited to the situation; now, unduly elated by Ewell's retreat, he formed the idea that Jackson had been surprised and would be obliged to remain at Manassas. He accordingly ordered a concentration of all his forces on the junction, ignoring the possibility of Lee and Longstreet attacking him or joining Jackson, and directed McDowell, whose force covered Thoroughfare Gap, to join in this concentration. (McDowell, however, on his own responsibility left Ricketts' division to hold the Gap.) "March at the earliest blush of dawn and we shall bag the whole crowd." Such were the orders typical of the real Pope.

In thus assuming that the enemy would be certain to adopt the course he had mapped out for them, Pope was merely acting as he had done on previous occasions. Such a course can seldom, if ever, lead to success. How different is Pope's attitude to that of von Moltke's—"Always put yourself in the position of your enemy. His most rational plans will generally convey the soundest deductions."

And so on the 28th Pope's forces converged on Manassas to find the junction absolutely deserted. Then ensued the utmost bewilderment. The enemy had been seen at Centreville. Pope at once set all his troops in motion for that place. Again, beyond a few cavalry patrols, not a sign of the enemy. Jackson had vanished off the earth. It was not till late in the evening that the thunder of battle far away to the south-west caused Pope to realise that whilst he had been marching north Jackson with his three divisions had been moving west. McDowell had probably intercepted him.

We must now return to Jackson's position at Manassas at midnight on the 27th/28th. To remain at the junction was to court disaster; wherefore, having set fire to all the stores, etc., Jackson ordered a night march for his whole force. Each division marched independently of the others and the roads were so chosen as to mystify Pope. The position elected by Jackson was on the right bank of the Bull Run, in the woods north of Groveton. Hill moved on Centreville, followed by Ewell who, however, turned west after crossing the river at Blackburn's Ford and marched to join Taliaferro, who had gone to Bald Hill, re-crossing to the right bank by the Stone

bridge. Hill on reaching Centreville turned south-west, and by noon the three divisions were concentrated, concealed from view, in the Groveton woods.

The position was a strong one and well suited to defensive action, while from its situation on the flank of the Federal march, the opportunity for an offensive stroke was always present. This was a *sine qua non* with Jackson, because it was all-important that Pope should be compelled to fight, and Jackson was determined to prevent him, if possible, from retiring to the left bank of the Bull Run before a battle in which Lee was to take part could be brought about. By this time the great danger the Confederates had incurred in their daring plan had practically disappeared, as Lee and Jackson could now join by way of Aldie Gap, if anything had prevented the Confederates getting through the Thoroughfare Gap.

It was due to Jackson's determination to prevent Pope retiring that, late in the afternoon, he attacked King's division, believing he was attacking the flank guard to Pope's army. The fighting was of the fiercest, and if tactically the battle of Gainesville, in which the loss of Ewell and Taliaferro came as a severe blow to Jackson, was of an indecisive nature, it was strategically successful. Jackson's object in attacking was fully obtained. Pope once more jumped to a wrong conclusion; and confident that Jackson had been intercepted whilst retreating, issued orders for a general attack on Jackson the next morning. He was blissfully unconscious that Ricketts had uncovered the Gap and retired before Longstreet, or that King's division had been so badly handled that it was preparing to fall back on Manassas.

The almost total absence of reliable information, combined with the criminal dispersion of his troops, demanded that Pope should act with discretion, and should, while concentrating his scattered forces, endeavour by reconnaissance to obtain that information which is an essential factor of success in war, before committing his troops to any definite plan of action. He had had much experience of the danger of jumping to conclusions without information, but with Pope '*experientia docet*' did not apply. He was eager to snatch a victory not so much for the sake of the issues involved, as for his own personal glorification, and to avoid being superseded. Instead of listening to the voice of prudence and collecting his scattered troops and the reinforcements fast approaching, he turned a deaf ear to her counsels. If Marmont for his action at Salamanca merited Napoleon's reproof that 'from personal vanity, the Duke of Ragusa has sacrificed the interests of his country, and the good of my service,' what words can we apply to the action of Pope?

And so we come to the eve of the second Manassas. The Confederate strategy, on the point of triumphing, awaits its crown of tactical success. If the art of the strategist consists in the preservation of the leading idea through all the varying complications that arise, can any mead of praise be too great for Jackson in his whole-hearted pursuit, and his recognition of the fact that only by defeating Pope in battle could the Confederates hope to attain any decisive result?

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## INDIAN ARMY CASTES.

### MADRASSIS.

BY CAPTAIN E. K. MOLESWORTH, R.E.

Lord Seaton, of Peninsular fame, when asked how a man could best become proficient in the art of war, is said to have replied : \* "By fighting, sir, and a great deal of it." The converse of this is equally true, and if asked how best to become inefficient in the art of war, Lord Seaton, or anyone else, might have answered : "By peace, sir, and a great deal of it."

Neither statement is absolutely true. Long peace need not make a man inefficient for war, any more than twenty campaigns could make a soldier of Frederick the Great's mule; but peace and war are as liable as ever to bring about the results described by Ruskin, when he says :—"I found, in brief, that all great nations learned their truth of word, and strength of thought, in war; that they were nourished in war, and wasted by peace; taught by war, and deceived by peace; trained by war, and betrayed by peace—in a word, that they were born in war, and expired in peace."

Up to a hundred years ago, war was the normal condition of things in the South of India, and, when Hyder was facing Joseph Smith, or Tippu wasting the country in front of Cornwallis or Harris, the Madrassis could have been described with truth as a warlike people. But a century of peace and prosperity has had its effect; the Madrassi in general is no longer a warrior, and only a remnant is left of what was once a warlike host.

In the following article I propose briefly to describe the various classes of Madrassis from which good fighting material can still be obtained, and to claim that, for the sake of that "remnant," the South of India should not be condemned altogether; but rather, that the good Madrassi, when he *is* found, should be encouraged in every possible way.

I am convinced, after some years' experience of the Madrassi, that it is not the man's caste that matters at all, but his physical and mental qualities. It is impossible to name a caste or a tribe, and say : "These are good fighters; recruit them;" but it is possible to describe a type of man, and say : "He will do you well; recruit him regardless of caste or tribe;" and I propose, therefore, to begin with some general remarks on recruiting in the Madras Presidency.

First of all, what is the ideal type at which to aim?

The most enduring soldiers the world has ever known—men whose sense of discipline was perfect; who could march, if the

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\* Quoted in the Army Review for April, 1912.

historians are to be believed, in their heavy armour as well as any of the lightly-equipped troops of to-day; who were never defeated, though sometimes their generals were; and who seemed equally fit for battle in tropical heat or arctic cold, were the Roman soldiers of two thousand years ago. The very qualities that were required of them are required of the soldier of to-day; and the following specification for a Roman recruit is the specification for a good recruit of to-day. If it were not labelled, it might be taken for that of a modern Jap or Gurkha:—

"The height was usually from 5 feet to 5 feet 3 inches. Men exceeding this height were not considered strong. Men under 5 feet were sooner accepted. Any disablement of hand or foot which rendered the man unable to wield his weapons, any weakness of sight or hearing, or any clear physical defect, exempted. The following was the man wanted, according to Vegetius, and a pretty good man he was, though the description belongs to a later period:

"The recruit must have sharp eyes, a head carried erect, broad chest, stout shoulders, big fists, long hands, not a big belly, of well-proportioned growth, feet and soles less fleshy than muscular. If he has all this, no stress need be laid on the height, for it is far more important that a soldier should be strongly built than tall.

'The man must also be of good moral character, as in this era of simple life and national virtues, was apt to be the rule.'"

The above description is, I think, an excellent one of a first rate Madrassi recruit, though it would not apply to a Sikh or Punjabi-Muhammadan, who combine tall, slim figures, with first rate fighting qualities. The danger of recruiting in the Madras Presidency is to take tall, smart, showy men; and it is these men who have been one of the causes of the rapid disappearance of the old Madras regiments. These are the men who cough and get pneumonia the moment they are brought into a severe climate; they cannot stand cold, and can best be described by a vulgarism as "having no guts." The only points in their favour are their parade smartness and their intelligence, and neither of these is usually available when most wanted.

The short, sturdy, stumpy, ugly Madrassi is the man who will work and fight equally well, and will keep fit under conditions that would soon kill his smart and lanky brother.

Nor is this type by any means deficient in intelligence. A few simple questions put to the recruit are a good means of testing him in this respect, and the recruiting officer should be able to judge from a man's face and eyes whether he is likely to prove too dull and stupid. The Indian officers of this type are the most intelligent and reliable I know.

A most important point is *weight*. A man of, say, 5 feet 6 inches, who weighs less than about 120 pounds, will usually be found

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\* From "Great Captains—Hannibal," by Col. Dodge, U. S. A.

incapable of withstanding hardship and exposure, and he should not be enlisted unless it is clear that, owing to inferior food, etc., he is below par, and will fill out. Not only should this point be insisted on when a man is enrolled, but he should be weighed periodically until final attestation, and, if for no apparent reason his weight remains below the standard, he should be discharged "as unlikely to become an efficient soldier."

Lastly, before coming to the question of the various classes in the south suitable for enlistment, I wish to emphasise the fact that there are types and races of men in whom the love of adventure does not exist, and to whom the idea of risking their skins, for any object whatever, is abhorrent. Such men will never make soldiers, even under a "Sergeant What's-is-name, who's a charm that makes a rifleman from mud." It is the recruiting officer's duty to know such types, and to be able to "size up a man."

The surest means for finding out the best types is to observe the men very carefully on service, on the march, in camp, at their work, in hospital. Who frequents hospital the most? Who falls out on the march? It will very seldom be found that the short, sturdy type falls into these categories. He is active and keen. It is the long, lanky man who collapses, pretty though he may look on parade.

The chief points to look at in a man proposed for enlistment are his feet, which should not be flat; his legs, which should be fairly straight and not knock-kneed; his fists, which should be large; his chest, which should also be large, a narrow-chested man being useless; his spine, which should be straight; his eyes, which are a fairly reliable index of his intelligence. Then, having been measured and weighed, he should be sent to the medical officer to be thoroughly "vetted." If returned by him as sound, it is an excellent thing to give him a run of four or five hundred yards, and look at his condition at the finish.

Even the best Madrassi recruits fall away in the leg; and below the waist they compare very unfavourably with a Gurkha. They are not hillmen, but on fairly level ground they are second to none in marching. Their calves may be thin, but they soon become as hard as iron; and, except on a steep mountain-side, this lack of calf is no drawback.

All the above remarks may seem beside the point in an article on Madrassis, but I have enlarged on what I believe to be the only type of Madrassi worth enlisting, because I believe this type should be picked out regardless of caste, and others as a rule rejected.

The question of caste in the south of India is very complicated. It is, however, easy to obtain a useful working knowledge, for purposes of recruiting, without any deep study.

The caste system of the Brahmans is a foreign importation in the south. The Dravidians, aborigines of Madras, were originally divided into tribes. Then, some time between 2000 and 500 B.C., came the Aryan invasion; but by the time it reached the south



bridge. Hill on reaching Centreville turned south-west, and by noon the three divisions were concentrated, concealed from view, in the Groveton woods.

The position was a strong one and well suited to defensive action, while from its situation on the flank of the Federal march, the opportunity for an offensive stroke was always present. This was a *sine qua non* with Jackson, because it was all-important that Pope should be compelled to fight, and Jackson was determined to prevent him, if possible, from retiring to the left bank of the Bull Run before a battle in which Lee was to take part could be brought about. By this time the great danger the Confederates had incurred in their daring plan had practically disappeared, as Lee and Jackson could now join by way of Ashie Gap, if anything had prevented the Confederates getting through the Thoroughfare Gap.

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And so we come to the eve of the Second Manassas. The Confederate strategy, on the point of tempting a well-timed crown of tactical success. If the act of the strategy consists in the preservation of the leading position, and the various complications that arise, can any move be proposed to go against Jackson, and his well-ordered pursuit of his strategy, and the result of the strategy by defeating Pope in battle, and the Confederates to put their strategy to a severe result?



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\* Quoted in the Army Review for April, 1912.

historians are to be believed, in their heavy armour as well as any of the lightly equipped troops of to-day; who were never defeated, though sometimes their generals were; and who seemed equally fit for battle in tropical heat or arctic cold, were the Roman soldiers of two thousand years ago. The very qualities that were required of them are required of the soldier of to-day; and the following specification for a Roman recruit is the specification for a good recruit of to-day. If it were not labelled, it might be taken for that of a modern Jap or Gurkha:—

"The height was usually from 5 feet to 5 feet 3 inches. Men exceeding this height were not considered strong. Men under 5 feet were sooner accepted. Any disablement of hand or foot which rendered the man unable to wield his weapons, any weakness of sight or hearing, or any clear physical defect, exempted. The following was the man wanted, according to Vegetius, and a pretty good man he was, though the description belongs to a later period:

"The recruit must have sharp eyes, a head carried erect, broad chest, stout shoulders, big fists, long hands, not a big belly, of well proportioned growth, feet and soles less fleshy than muscular. If he has all this, no stress need be laid on the height, for it is far more important that a soldier should be strongly built than tall.

"The man must also be of good moral character, as in this era of simple life and national virtues, was apt to be the rule."\*

The above description is, I think, an excellent one of a first rate Madras recruit, though it would not apply to a Sikh or Punjab Muhammadan, who combine tall, slim figures, with first rate fighting qualities. The danger of recruiting in the Madras Presidency is to take tall, smart, showy men, and it is these men who have been one of the causes of the rapid disappearance of the old Madras regiments. These are the men who cough and get pneumonia the moment they are brought into a severe climate; they cannot stand cold, and can best be described by a vulgarian as "having no guts." The only points in their favour are their parade smartness and their intelligence, and neither of these is usually available when most wanted.

The short, sturdy, stumpy, ugly Madras is the man who will work and fight equally well, and will keep fit under conditions that would soon kill his smart and lanky brother.

Nor is this type by any means deficient in intelligence. A few simple questions put to the recruit are a good means of testing him in this respect, and the recruiting officer should be able to judge from a man's face and eyes whether he is likely to prove too dull and stupid. The Indian officers of this type are the most intelligent and reliable I know.

A most important point is weight. A man of, say, 5 feet 6 inches, who weighs less than about 120 pounds, will usually be found

\* *Prætor's Great Captain*, etc., by C. C. Lang, U.S.A.

incapable of withstanding hardship and exposure, and he should not be enlisted unless it is clear that, owing to inferior food, etc., he is below par, and will fill out. Not only should this point be insisted on when a man is enrolled, but he should be weighed periodically until final attestation, and, if for no apparent reason his weight remains below the standard, he should be discharged "as unlikely to become an efficient soldier."

Lastly, before coming to the question of the various classes in the south suitable for enlistment, I wish to emphasise the fact that there are types and races of men in whom the love of adventure does not exist, and to whom the idea of risking their skins, for any object whatever, is abhorrent. Such men will never make soldiers, even under a "Sergeant What's-is-name, who's a charm that makes a rifleman from mud." It is the recruiting officer's duty to know such types, and to be able to "size up a man."

The surest means for finding out the best types is to observe the men very carefully on service, on the march, in camp, at their work, in hospital. Who frequents hospital the most? Who falls out on the march? It will very seldom be found that the short, sturdy type falls into these categories. He is active and keen. It is the long, lanky man who collapses, pretty though he may look on parade.

The chief points to look at in a man proposed for enlistment are his feet, which should not be flat; his legs, which should be fairly straight and not knock-kneed; his fists, which should be large; his chest, which should also be large, a narrow-chested man being useless; his spine, which should be straight; his eyes, which are a fairly reliable index of his intelligence. Then, having been measured and weighed, he should be sent to the medical officer to be thoroughly "vetted." If returned by him as sound, it is an excellent thing to give him a run of four or five hundred yards, and look at his condition at the finish.

Even the best Madrassi recruits fall away in the leg; and below the waist they compare very unfavourably with a Gurkha. They are not hillmen, but on fairly level ground they are second to none in marching. Their calves may be thin, but they soon become as hard as iron; and, except on a steep mountain-side, this lack of calf is no drawback.

All the above remarks may seem beside the point in an article on Madrassis, but I have enlarged on what I believe to be the only type of Madrassi worth enlisting, because I believe this type should be picked out regardless of caste, and others as a rule rejected.

The question of caste in the south of India is very complicated. It is, however, easy to obtain a useful working knowledge, for purposes of recruiting, without any deep study.

The caste system of the Brahmans is a foreign importation in the south. The Dravidians, aborigines of Madras, were originally divided into tribes. Then, some time between 2000 and 500 B.C., came the Aryan invasion; but by the time it reached the south

it had so dwindled in strength that the Aryan never succeeded in absorbing the southern races as he had absorbed those of the north. The Brahman, however, gradually converted the tribes into castes, or rather grafted his caste system on to the tribes. It is clear, therefore, that no Dravidian has any claim to high caste; indeed, it is possible in some regiments almost to ignore caste, and, to a great extent, pride of regiment may take the place of pride of caste. *O! si sic omnes!*

The mistake, however, must not be made of enlisting men of castes who have no liking for a military life. There are some classes in Madras who are no more suitable for soldiers than that type of Englishman whose *bête noir* is what he calls "militarism," and whom nothing short of the sack of London by a foreign power could convert to sound views. There are also castes and sub-castes who are strict vegetarians, or who have other equally unmilitary prejudices, and are therefore unsuitable.

The indiscriminate use by Madrassis of the word "caste" gives a clue to its history in the south. They use it to express tribe, class, caste proper, occupation or trade, in a manner that the castes of Northern India would quite fail to understand. It is only necessary to state here, however, that as a rule caste means trade or occupation, such as blacksmith, *dhobi*, barber, chuckler (*mochi*), etc., but that the great agricultural class, who form the bulk of the population, and from whom the best recruits are drawn, stands out by itself, and is divided into many castes. This latter arrangement is only natural, as the class includes all grades of society from the wealthy *zeminadar* to the cooly.

For all practical purposes, then, it may be taken that a suitable Hindu recruit will belong to one of the castes connected with land, such as Vellala or Agambadyam, or else to one of those which are merely names for occupations, such as Kummalar (artisan).

Again, the south of India is divided into races speaking different tongues, and each of these has its own caste name. Geographically, the main divisions are Tamil, Telugu, and Canarese, and they may be classified roughly as follows to provinces:—

*Tamil*.—Chingleput, South Arcot, Trichinopoly, Tanjore, Madura, and Tinnevely.

*Tamil and Telugu*.—North Arcot.

*Tamil and Canarese*.—Salem, Coimbatore, Mysore, and the Nilgiris.

*Tamil and Malayalam*.—Travancore.

*Telugu*.—Ganjam, Vizagapatam, Godaveri, Kistna, Guntur, Nellore, Kurnool, Bellary, and Kadapa.

*Telugu and Canarese*.—Anantapur.

*Malayalam*.—South Canara, Malabar.

The working classes, however, naturally migrate to the centres of work, and know no geographical bounds. The Kolar Gold Fields are a good example of this.

The Canarese are altogether excluded, for though tough and hardy, they appear to be a timid race, with no fighting spirit.

Only a small percentage of Telugus is taken. They are usually intelligent, fine-looking men, but delicate. On the other hand, my remark to the effect that, within limits, the *man* is everything and the *caste* nothing, is borne out by the fact that when a good tough Telugu, with plenty of "guts," can be found, he makes an invaluable soldier, and I could produce several Telugu Indian officers with four or five campaigns to their credit in support of my argument. It would, therefore, be a mistake to exclude the Telugu altogether.

The best recruiting centres at present are the agricultural districts of North Arcot. It is from here the coal-black Tamil cultivator comes. These men make excellent soldiers, and, owing to their familiarity with the soil, are much sought after by pioneer and sapper corps. They correspond to the yeoman of our own country, and in every nation the yeomen make the best soldiers. In speaking of the Japanese Army, Sir Ian Hamilton says:—"The peasant owner is a man: a proud, strong, independent man, who has a stake in his country. These are the men we want as soldiers; the yeomen who have been from the beginning of history and will be to its end, the very backbone of empires." There are great and fundamental differences between the British or Japanese yeoman and his counterpart in India, but the Vellore cultivator is as near an approach to him as we can get in the south.

I propose now to describe briefly the qualities, characteristics, and customs of such castes and classes as are considered suitable for enlistment.

A list of these castes is given at the end of this article.

#### THE PARAIYANS.

The origin of the word Paraiyan or Parayer is doubtful. It is usually ascribed to the original root from which the English word "Pariah" or outcast is derived; it is also said to signify "drum-beater," and this derivation is supported by the fact that the beating of drums in the south is usually a Paraiyan function. Whatever the derivation, the name is an unfortunate one for a class which contains a large proportion of intelligent, strong, hardworking men, who make excellent soldiers, and who have been described as "the very life-blood of the country in whatever field of labour they engage."\*

Outcasts, or rather "outcastes," they certainly are from the Brahman's point of view; but as they form the majority of the population and are its most useful members, there is no reason why any European should consider them as such. Possibly, too, they were dubbed Paraiyans originally, because they were too independent to have anything to do with the invading Brahman and his tenets. The reception met with by a Paraiyan who enters the Brahman

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\* Quoted in Thurston, Vol. VI, p. 119.



quarter is at least equalled by that of a Brahman who is foolhardy enough to enter the Paraiyan quarter.

It must not be supposed that "Paraiyan" is merely the name for anyone who has no claim to a higher caste; the Paraiyans are a distinct tribe, with traditions of high origin, and with an indisputably long connection with the soil, in respect of which they have vested rights recognised officially. There are many divisions of the Paraiyan class, but it is not possible here to do more than indicate a few general characteristics. They are practically demon-worshippers, or rather, propitiators, but they recognise a Supreme Being ("He who is") (*c.f.*, Exodus Ch. III., v. 14); and they reserve a special hell (Vinnamangalam) for those excommunicated from them. It is the custom of their women to trace elaborate patterns with rice-flour or lime outside their doors to prevent the entrance of evil spirits—though it has been said that the origin of the custom was to provide food for insects.

They usually bury their dead, but sometimes burn them.

Polygamy is not common among them; indeed, a Paraiyan proverb says:—"The experience of a man with two wives is anguish." Thurston quotes several Tamil proverbs, which throw a good deal of light on their characteristics. I quote only three—

"If a Paraiyan boils rice, will it not reach God?" *i.e.*, a Paraiyan has the same access to God as others.

"You may believe a Paraiyan even in ten ways; you cannot believe a Brahman." (This is not a Paraiyan proverb, and is therefore a sincere compliment.)

"The gourd flower and the Paraiyan's song have no savour." (A Paraiyan saying about their own vocal talent!)

The Abbé Dubois, in his "Hindu Manners and Customs," gives a heartrending account of the Paraiyans, describing them as a dirty, drunken, abject crowd, with no sense of discipline and no proper pride. In the century that has elapsed since the Abbé wrote, however, the Paraiyans, owing to the efforts of good missionaries like himself, and to the general progress of civilisation, have made great strides. I know no better Indian than the good Paraiyan Indian officer, whom one considers an Indian gentleman, and who is as smart and clean as any Asiatic.

When a Paraiyan recruit first joins, he is apt to be less particular as to cleanliness than he might be; but a rigid course of bodily sanitation while he is a recruit gradually impresses him with the advantages of cleanly habits, besides making him feel that they are part of his military duty.

As to their former drunken habits, complained of by the good Abbé, there must have been a great improvement in this respect since his days, for, in looking through a year's regimental crime reports, I find not a single case of drunkenness against any of the Paraiyans.

Nor is it now possible to endorse the Abbé's remarks on their lack of discipline. They have no headmen in their villages, and

seem to be a thoroughly independent class, caring for nobody and cared for by none, but there is no doubt that the British officer has real authority over them, and under him they make the best disciplined soldiers of all. However, the Abbé described them as he saw them and lived among them a century ago, before they had come under the wonderful influence of military discipline.

They know no geographical bounds. They come from cultivating the soil in Arcot, from working on the railways, from gold-mining at Kolar, or from the rice-fields anywhere. They are to be found in Natal, and on the Panama Canal. They seem to have in them something of that spark of roving energy not always found in the native of India, but an invaluable military quality.

There is no general type of Paraiyan by which they can be described, and even an Indian cannot always tell a Paraiyan at sight, though he can find him out at once. Their dress is usually non-descript, and their hair short. I know of no other distinctive marks.

For recruiting purposes it is only necessary to add that if a Paraiyan is up to the mark mentally and physically, and if his antecedents are found all correct, it is quite safe to enlist him. They seldom turn out failures, and, naturally, never have any caste prejudices, are not particular about their food, and will turn their hands to anything.

In fighting spirit the Paraiyans are second to none of the other classes; nor have they ever failed in any of the numerous campaigns in which they have taken part.\*

#### CHRISTIANS.

Most of the foregoing general remarks about Paraiyans apply equally to Indian Christians. The latter are usually better educated, and naturally gravitate more towards the large towns. Their close contact with western ideas has had the desirable effect of freeing them from unmilitary and anti-European prejudices, and has made them excellent subjects for a good military education. Like the Paraiyans they have no prejudices about what they eat and drink. The Christian Indian officer is the best educated and most intelligent I know, and their war records show how invaluable such a man may be on service.

#### MUHAMMADANS.

The Madrassi Musalman has a bad name, and the reason is not far to seek.

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\*The Paraiyans are thus described in Colonel Welsh's "Reminiscences," published in 1830, and quoted in Wilson's "History of the Madras Army":—"Brave, active, and attached as they were to their officers and the service, with a few European failings, such as dram-drinking, and eating unclean meats, have of late years been excluded from the line in order the more fully to conciliate the higher classes. \* \* \* They are now enlisted only in the Pioneers (represented by H. M.'s Sappers and Miners), and as artillery, and tent lascars. The former corps, one of the most useful in the army, is composed almost entirely of this degraded class than whom there exists, not in all India, a braver, more efficient, or zealous body of troops."

There are some two-and-a-half million so-called Muhammadans in the Madras Presidency. Of these one-and-a-half million are mixed breeds, such as Moplahs—the descendants of Arab fishermen and Dravidian women of the west coast,—Labbais, and other converts to Islamism, and not genuine Muhammadans at all. Of the remaining million, under 900,000 of both sexes use Hindustani, the true Madrassi Musalman's language, as their household tongue.

Often a so-called Muhammadan presents himself for enlistment, who has a low class Hindu face; and it is these undesirable and obvious converts who get the bad name for the Madrassi Musalman. The low class Muhammadan, too, as often as not, marries a Hindu woman, and the progeny of this mixture calls himself a Saiyyid, or a Sheikh, or a Pathan. These are, as a rule, useless also.

It is clear then, that of the two-and-a-half million so-called Madrassi Muhammadans, only a small percentage, say, 25 or 30, are genuine. On the other hand, some of the converts from good Hindu classes make useful soldiers. Wholesale and forceable conversions were common in Tippu's time.

Great care must be taken, therefore, in enlisting Muhammadans. The best come from Bellary, the Northern Circars, Hyderabad, Mysore, and Vellore.

The true Muhammadan was originally a fighter, and his fighting spirit remains excellent still.

#### THE TAMIL CASTES.

Agamoodiers, Vellalas, Vanneyars, Shanars, Kammalars, Shaniers, Edyers.

It is extremely difficult to obtain any information about caste from the men themselves. So little do they appear to know, that very often one man does not know the caste of some other man in his company; and clearly, therefore, the same importance does not attach to caste prejudices and customs in the south as in the north.

The Tamils are the descendants of the dark-skinned Dravidians of the south. They have largely intermarried with various settlers, and only a few tribes can claim to be pure-blooded Tamils. The following three castes were placed by the Brahmans in the Sudra division of their classification, but the Vellalas themselves claim a higher origin.

The Agamoodier or Agamudaiyans, of whom there are some 300,000, are a dark-skinned class of cultivators and artisans, closely connected with the Kuilars and Maravans mentioned later on, with whom to some extent, they inter-marry. They are found in all the Tamil districts; and, as a rule, are a plucky, fighting lot, and seem better educated, or at least easier to educate, than their kindred castes. They eat meat and drink anything, and bury or burn their dead.

Closely allied to the Agamoodiers are the Vellalas, the landed aristocracy of the south, a great farmer class, over two-and-a-half

million strong. Their name also means "Lords of the Flood," and is supposed to be an indication of their skill in controlling flood-water for agricultural purposes. Some of them do not eat meat and are consequently to be avoided, but as a rule they make good, hard-working soldiers. They are supposed to have conquered the Telugu country in ancient times, and to have left settlers there. The Vellalas are "a peace-loving, frugal, and industrious people, and, in the cultivation of rice, betel, tobacco, etc., have perhaps no equals in the world." •

Their frugality is illustrated by the rigid dress regulations of their women, who wear but one garment apiece for a whole year, and if this gets wet, it must dry on the body, or if it gets dirty, half of it must be unwrapped and washed at a time.

Their agricultural industry is described as being the cause of most of the good things of life which come to the inhabitants of these regions; domestic happiness, the strength of kings, the profit of merchants, the welfare of all—these all spring from the efficacy of the Vellala's plough.

In religion some are Vaishnavites and some Saivites. They burn their dead. "Agriculture is no agriculture, unless it is performed by the Vellalas," is a proverb which indicates their prowess as farmers.

A similar caste are the Vanneyars, a race of field-labourers found in all the Tamil districts. They have no awkward prejudices, and having dug for generations, are very handy with the pick and shovel.

These three castes, Agamoodiers, Vellalas and Vanneyars, are the most important of the great agricultural class of South India, and the names are caste names, not merely titles of handicrafts. In the next four cases, on the other hand, the names merely indicate the occupation of the class.

The Shanars are toddy-drawers, and come from wherever the palm grows in the south. At climbing spars and bridging work they are unequalled; and this is only to be expected, since it is a common task for a Shanar in his native wilds to climb from forty to fifty trees each of forty to fifty feet high, three times a day. There is a legend that their ancestress, who first taught them to climb trees, gave them a medicine to protect them from falling, and that the squirrels, eating some of this, have enjoyed the same immunity. To guard against the dangers of their profession, they do *pūja* once a year to all their palmyra-climbing implements, and this custom has been adopted by such of them as have become Christians in an annual service at which these implements are presented at the altar.† Their claims to ancient lineage date back to the deluge and Noah, one of whose grandsons, they say, first colonised South India and founded their race. Holding this belief, they naturally claim high caste, and the various riots in which they have been concerned mostly arise from such claims and the consequent resentment of other castes, who place the toddy-drawers only one above the

\* Madras Census Report, 1871, quoted in Thurston.

† Thurston, Vol. VI, p. 375.

**Paraiyans.** Their particular enemies in this respect are the Maravans. On the whole, the Shanars are a hard-working, intelligent, pushing race, of good physique, with an almost British love of athletics; and it is only natural that such a people should at times become impatient of their caste restrictions, and break out. Very many of them, preferring the freedom of Christianity, have openly become Christians. They seem originally to have been a fighting race, for the names of some of their sub-castes mean bowmen, foot-soldiers, etc.; and on good authority they were noted for their fidelity to those for whom they fought.

The Kummalar class includes the five artisan castes of gold smith, brazier, blacksmith, carpenter, and mason. They make useful artificers. As one would expect, they come from no particular region, and are found wherever there is use for their manual skill. They claim descent from Visvakarma, architect of the gods, and wear the sacred thread; but I do not think they are officially placed high in the Brahmanical classification. They are Saivites, and their goddess personified is a fire-pot and bellows. There is a traditional friendship between them and the Muhammadans, the origin of which is the subject of various legends; but as the latter take very kindly to smith's work, it seems to me that the real cause of the alliance may be the freemasonry of craft.

The Shaniers or weavers may, from the recruiter's point of view, be treated as a branch of the Kummalars.

The Edyers are shepherds, and it would be a mistake to enlist more of them than a very small percentage. They are, as a rule stupid, but possibly, owing to their familiarity with the open country by day and night, might be trained as guides and scouts.

### THE TELUGU CASTES.

The Telugu is usually taller, smarter looking, and more polished than the Tamil; but he is delicate and excitable. Great care must be taken in enlisting them. It may be taken as an axiom that only, very exceptional Telugus are fit to be enlisted.

The Telugu comes from the region enclosed between Ganjam, Bellary, Madras, and the Coromandel coast.

As in the case of the Tamil castes, the various caste names all indicate their professions, except where they are cultivators. None of these castes seem to have unmilitary prejudices.

The good and exceptional Telugu, when he is found, is a most valuable man. He is very intelligent, and takes kindly to education; and, but for their excitable nature and delicate physique, it would be advantageous to enlist more of them. As it is, the enlistment of Telugus is a danger, and only picked men should be accepted. So small a percentage of Telugus are considered—and, I believe, rightly considered—to be worth enlisting, that I do not propose to describe them further.

## OTHER CASTES.

A few other miscellaneous castes remain which should not be excluded, as valuable recruits can be obtained from them; but it would not be advisable to enlist a large proportion, for though individuals may be harmless enough, a large number might affect their unit with undesirable prejudices or customs.

The Wulloovars or Valluvans are Paraiyan priests, and as such have great influence with the Paraiyans. They are an intelligent class and well educated, but are inclined to consider themselves as superior beings, deserving of special treatment. History has proved that a priest-ridden army has serious drawbacks, and it is certain that priestly influence and military discipline are often antagonistic. While useful men can, therefore, be picked from this class, it would not be advisable to enlist more than a very small percentage of them. Their weird customs and beliefs are in strange contrast with the smartness and level-headedness with which they carry out their military duties.

The Wadders or Oddes are a class of tank-diggers, stone quarriers, well-sinkers, and earthworkers, and on account of their occupation are useful as sappers. They are found in all parts of the Presidency, but appear originally to have been a Telugu caste, hailing, as their name indicates, from Ohdra or modern Orissa. They have no caste prejudices, and are supposed to indulge a good deal in intoxicating liquors. They wander about from place to place wherever navvies are required, just as some 100,000 migratory navvies in England are supposed to do.\*

The Chucklers are a thoroughly useful caste, whose occupation is leather-work. They have no caste prejudices whatever; indeed, even where caste is practically ignored, the chuckler or *mochi* must eat by himself, for no men of other castes will eat with him. As the chuckler is one of the most useful and indispensable members of society, this ostracism indicates one of the pernicious aspects of the caste system.

In the sappers, by calling all leather-workers "saddlers" the difficulty has been met, and men of all sorts can be got to do leather-work without losing caste.

The Kullars or Kallans are closely akin to the Agamoodiers already mentioned. Like them they are a dark-skinned aboriginal tribe found in the very south of the Peninsula. Their name means "theft," and they appear to have been a military race, who, their occupation as regular soldiers gone, "took to marauding, and made themselves so obnoxious by their thefts and robberies, that the term Kallan (thief) was applied, and has stuck to them as a tribal appellation."

The Kullars, owing to their independent character, have retained their Dravidian customs to a greater extent than almost any other tribe. They have no unmilitary prejudices and are usually field-labourers, unless employed in keeping up the reputation of their

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\*Thurston, Vol. V, p. 435.

caste by thefts and robberies. Their ingenuity in the latter line of business, and especially at cattle-lifting, is marvellous. During a campaign in South India the horses of Clive and Stringer Lawrence were stolen by two Kallan brothers.

Some of their customs are horrible, but, generally speaking, they are a sporting lot, and their favourite pastime of bull-baiting is worthy of description. Bulls or bullocks are over-fed for some days until they develop a wicked look in the eye. The sport then consists in trying to capture a cloth or other prize placed on the bull's horns. The animal is let loose and stirred up until it charges; everyone runs away, and anyone about to be caught on the horns, throws himself flat on the ground, and the charging beast passes over him. Often several beasts are let loose on the crowd at once, and the scene becomes lively. As each animal begins to work off his superfluous energy, some bold spirit tries to seize the cloth; and when all the prizes are won, the crowd goes home, thoroughly happy and pleased. A class whose chief amusement is of such a sporting nature, certainly deserves our sympathy and encouragement; they are, however, so illiterate, and so utterly lacking in ability to learn anything, their notions of *meum* and *tuum* also are so unconventional, that they cannot be enlisted in large numbers.

A sort of linked battalion are the Maravans. They are also an aboriginal tribe coming from the same parts. They were once a fierce and turbulent race, famous for their military prowess. A century ago they gave the British much trouble, but have now settled into a peaceful, though somewhat bold and lawless, agricultural class. They are fine, coal-black, big-chested men, and quite free from unmilitary prejudices. The main objection to enlisting them is the same as in the case of the Kallans—their total want of education and of ability to learn. Like their fellow-sportsmen they are greatly addicted to bull-baiting.

Nair recruits are of a sturdier build and lighter skin than the average Dravidian. They are usually very smart and energetic, but occasionally they find the yoke of military discipline too heavy, and kick it off in a wild outburst of rage at some superior officer who has given them offence. They hail from the Malabar coast, and those that make the best soldiers are usually cultivators from the Cannanore region.

The author of "Memoirs of Early Life and Service of a Field Officer" remarks:—"As to the women of the Nair . . . . . castes, I do not think that nature ever gave evidence to forms of more perfect symmetry, or of greater delicacy of feature; however in complexion they may be of a deeper shade than their sisters in a more northern latitude."

Such women ought to be the mothers of good recruits. The gallant field officer adds a remark about "their well-armed and jealous male attendants," which is also promising. They are a polyandrous race, but the men seem none the less manly on this account. Care should be taken in selecting Nairs, for the term has

become a very wide one; and although they were originally a military caste, a large proportion of them now are quite unsuitable for soldiers. They are not particular about what they eat and drink.

The Sembadavars are a Tamil class of freshwater fishermen and boatmen, very handy at all water work. They fancy themselves immune from drowning; and this immunity seems about as real as the nine lives of the cat.

#### CONCLUSION.

In the foregoing remarks I have tried briefly to point out the main characteristics of the classes of Madrassis most suitable for enlistment; but I say again, that in the south it is the *man* that matters and not his caste. Provided that a recruit is up to the standard in all respects, and belongs to one of the classes enumerated in the list, it is usually safe to enlist him. The recruiter should, however, keep his eyes open and look for "fresh woods and pastures new," whence good material might be obtained.

When enrolled, the recruits should be given such a course of training and discipline as will, on the principle of the survival of the fittest, weed out any wasters.

In conclusion, in case anyone should consider that I have made too high claims for the Madrassis, I would say that it was of Madrassis Lord Wolseley wrote:—"The best native soldiers, taking them all round, whom I ever served with in India, were the Madras Sappers. Their coolness under fire, indifference to danger, their discipline and their pride of regiment, marked them out on all occasions as first-rate soldiers."\*

NOTE.—Much of the information contained in this article on the subject of Paraiyans, Vellalas, Shanans and Kullans has been obtained from "The Castes and Tribes of Southern India," by E. Thurston, Esq., C.I.E., from whose standard work I have, with the author's kind permission, quoted freely.

#### *Suitable classes of Madrassis for enlistment.*

Castes.	Original occupation of the caste.
PARAIYANS. CHRISTIANS. MUHAMMADANS.	
TAMIL CASTES—	
Agamoodiers or Agamudaiyans ...	Cultivators.
Vellalers ...	"
Vanneyers ...	"
Shanars ...	Toddy-drawers.
Kammalars...	Artisans
Shaniers ...	Weavers.
Edyers ..	Shepherds.

\*Fortnightly Review, August 1888.



*Suitable classes of Madrassis for enlistment.*

Castes.	Original occupation of the caste.	
<b>TELUGU CASTES—</b>		
Shalivers ... ..	...	Weavers.
Edigawars ... ..	...	Toddy-drawers.
Kavaries or Cowrahs ... ..	...	Cultivators.
Baligis ... ..	...	"
Elamawars ... ..	...	"
Capoowars ... ..	...	"
Malawars ... ..	...	Parayers.
Sadur Bogis ... ..	...	Dhandy-bearers
Mathegawars ... ..	...	Leather-workers
Commarawars ... ..	...	Smiths.
Reddies ... ..	...	Cultivators.
Sadarnaikers ... ..	...	Mountebanks.
Salawars ... ..	...	Potters.
Gentus ... ..	...	Cultivators.
Ratchawurs ... ..	...	Kshatriyas.
<b>OTHER CASTES—</b>		
Wullooovers ... ..	... Tamil	Paraiyan priests.
Sadiachee ... ..	... "	Cultivators.
Mootras ... ..	... Telugu	"
Pullars ... ..	... Tamil	Cultivators and fishermen.
Waddars or Oddes ... ..	... Tamil & Telugu.	Tank builders, stone-cutters, well-sinkers, etc.
Chucklers ... ..	... "	Leather-workers (apparently of Telugu origin, but live in Tamil country).
Yaniers ... ..	... Tamil	Oil-pressers.
Cosawars ... ..	... "	Potters.
Kullars ... ..	... "	Cultivators.
Marawars ... ..	... "	"
Nairs ... ..	... Malayalam	"
Kurumbas ... ..	... Telugu	Shepherds.
Rajas ... ..	... "	Kshatriyas.
Sembadawars ... ..	... Tamil	Fishermen and boatmen.

## THE CANADIAN MILITIA.

BY CAPT. BRUCE HAY, Q. V. O. CORPS OF GUIDES.

Interest in matters concerning the Empire as a whole, as distinct from its component parts, undoubtedly grows year by year in the self-governing dominions as well as in the mother-country, and so perhaps it will not be out of place to draw further attention \* to the Militia Forces of Canada, which have lately undergone some important changes in organization. The earliest record of the organization of the Canadian Militia harks back to the middle of the seventeenth century, when a company (French) was formed in each parish for service against the constant inroads of the Indians, and from that time until France ceded Canada to England more than a century later the Canadian militiamen were frequently engaged in conflict either with the British or with the North-American Indians, as many as 10,000 having been under arms at the same time.

Under the British régime a Militia Act was passed in 1792 by the Upper Province (now Ontario) to the effect that every male between the ages of 16 and 60 should serve in the militia, each man being obliged to appear a stated number of times annually, armed and equipped at his own expense, or submit to a heavy fine.

In 1807, strained relations with the United States brought about a ballot of the Militia, to which both English and French cordially responded. One-fifth of the force was held ready for action, thus temporarily averting the impending war.

In 1811, the Militia of Canada was estimated to amount to 11,000 men, and of these some 3,000 actually took part in the war of 1812—1814. For this war we were not, as usual, properly prepared, and the fact of the Peninsula war being in progress prevented reinforcements to anything approaching an adequate extent being despatched from England. Canada, however, loyally responded, and it was due to her that we were able to maintain the struggle for the first two years of the war. By the autumn of 1814, 16,000 British regulars had arrived from the Peninsula and peace was signed in December of that year. Not until twenty-three years later was the Militia again called out—this time to quell the political rebellion of 1837, when, it may be mentioned, those disaffected were being aided in every way from across the border.

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\* This article, which was written last summer, has unavoidably been held over till January, owing to lack of space. It is now published in amplification of the necessarily brief reference to the Militia made in Colonel Twining's paper on the Dominion of Canada, published in the Journal for October 1912.—  
EDITOR.

The outbreak of the war in the Crimea, and the consequent withdrawal of most of the British regular troops from Canada, gave rise to the Militia Act of 1855, which marked a very decided step forward in the development of the Active Militia. Up to this time the militia systems in force since the cession had really provided for little more than an occasional muster of territorial militiamen. Now, however, while the new act recognised the old sedentary militia system, it sanctioned the important step of the raising and maintenance of a permanent organized force to form the nucleus of a national Canadian 'Active Militia.' This Active or Volunteer Militia force was not to exceed 16 troops of cavalry, 7 field batteries, 5 foot companies of artillery, and 50 companies of riflemen, or 5,000 of all ranks. Field batteries were to perform an annual training of twenty days (ten of these continuous), and other units one of ten days.

Early in 1856 all the corps authorised were organized, several of them having been equipped at the expense of the officers and men themselves.

The Indian Mutiny stimulated the people of Canada to offer spontaneously a regular regiment to the Imperial Government. This offer was accepted in 1858, and resulted in the raising of the Prince of Wales' Regiment (Royal Canadians). The 'Trent' affair and the ensuing menaces of invasion in the years 1861 and 1862 aroused the energies of the newly organized force, voluntary drills taking place daily in many places, and gave birth to many new organizations of the Active Militia, the strength of which was in 1863 increased to 35,000 men.

The St. Alban's (Fenian) raid of 1864 portended complications with the United States, and 10,000 men were called out for about a month. Again, in May 1866, when the Fenians crossed the frontier, 14,000 men were under arms, to be increased to 20,000 early in June, upon which the Fenians retreated over the border.

In 1867, the British North America Act was passed, by which the British colonies in North America were brought into the federation of the Dominion of Canada.\* By this the supreme command of the forces was vested in the person of the Sovereign, and their control entrusted to the Dominion Parliament. Soon afterwards the Department of Militia and Defence was formed, and in 1868 the first Militia Act of the Dominion became law; this fixed the Active Militia at 40,000 men.

The Fenian raids of 1870 and 1871 necessitated some 6,000 of the Militia being called out to co-operate with the regulars, while two battalions also joined Colonel Garnet (now F. M. Lord) Wolseley's Red River Expedition of 1871. In 1885 occurred the North-West Rebellion, when some 5,500 men of the Militia took part

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\* The four original provinces to form the dominion were Upper Canada, Lower Canada, New Brunswick, and Nova Scotia. The remainder (with the exception of Newfoundland, which still stands aloof) joined the confederation later.

in the operations conducted by Major-General Sir Frederick Middleton.

Canada contributed three contingents during the course of the South African War, despatching over 6,000 of all ranks, while some 1,200 were recruited for the South African Constabulary; 1,000 more did garrison duty in Halifax (Nova Scotia), thus setting free a regular battalion for service elsewhere.

Meanwhile sanction had been accorded for the formation of the Permanent Force of the Active Militia, the various units of which came into being on the following dates:—

Royal Canadian Dragoons (2 squadrons)	...	1883-4
Lord Strathcona's Horse (Royal Canadians), (2 squadrons)	... ..	1901
Royal Canadian Artillery (2 batteries). Since re-organized into Horse Artillery and Garrison Artillery)	... ..	1871
Royal Canadian Engineers (9 detachments)	...	1903
Royal Canadian Regiment (10 companies in 5 detachments)	... ..	1883
Canadian Permanent Army Service Corps (6 de- tachments)	... ..	1903
Permanent Army Medical Corps (10 detachments)	...	1904
Canadian Permanent Army Veterinary Corps (6 detachments)	... ..	1910
Canadian Ordnance Corps (13 detachments)	...	1903
Canadian Army Pay Corps (11 detachments)	...	1906
Corps of Militia Staff Clerks	... ..	1905

In 1904 was passed the Act under which the Canadian Militia is now constituted, and in 1905 the Dominion assumed the responsibility for the defence of the fortresses of Halifax and Esquimalt, from which the regular British garrison departed in the following year.

The Canadian Militia of the present day is constituted under the Militia Act of 1904, under the provisions of which the supreme command is vested in the Sovereign, to be exercised and administered by His Majesty or by the Governor-General as his representative.

The Militia is divided into:—

A—The Active Militia { (a) The 'Permanent Force.'  
(b) 'City' and 'Rural' Corps\*  
raised on a militia basis.

B—The Reserve Militia.

The Reserve Militia does not actually exist, but would comprise all male inhabitants between the ages of 18 and 60, who are British subjects and are not disqualified or exempt by law.

In order to avoid confusion (b) is always referred to in common parlance as the 'Active Militia,' as distinguished from the 'Permanent Force.'

The duties of the Militia are, briefly :—

**Duties of the Militia.**

- (1) The support of the Civil Power.
- (2) The defence of Canada from foreign aggression.
- (3) The maintenance of the fortresses of Halifax, Esquimalt, and Quebec.

The administering authority is the Militia Council, formed on lines analogous to our Army Council, and composed of—

1. The Hon. The Minister of Militia and Defence ... ... President.
2. The Deputy Minister ... Civil Member and Vice-President.
3. The Chief of the General Staff ... 1st Military Member.
4. The Adjutant-General ... 2nd " "
5. The Quartermaster-General ... 3rd " "
6. The Master-General of the Ordnance ... 4th " "
7. The Accountant of the Dept. of M. and D. ... Financial Member.

There is also the Inspector-General, who reports on the efficiency of the militia in a similar way to our Inspector-General of the Home forces. He is aided by a staff officer, as well as by four Inspectors of—

1. Cavalry.
2. Horse, Field, and Heavy Artillery.
3. Coast Defence Artillery.
4. Engineers.

These last-named officers are really entrusted with double functions, for they administer the various arms in question as well.

The Chief of the General Staff is *ipso facto* the Chief of the Canadian Section, Imperial General Staff, and works in close connection with the War Office. In his branch are three directorates, *viz.*, military operations and staff duties, military training, and musketry ; with assistant directorates of Military Intelligence, military surveys, and signalling. Military intelligence is sent in, amongst other sources, by the Canadian Corps of Guides, a corps composed in peace entirely of officers, who are distributed among the various commands.

The adjutant-general has under him two assistant adjutants-general, the director-general of medical services, and a 'specially employed' officer, who corresponds in many ways to our Judge Advocate-General.

The Quartermaster-General's Branch is composed of the two directorates of transport and supplies, and of clothing, equipment, and ordnance.

Under the Master-General of the Ordnance are the directors of artillery, and of engineer services, and also the inspector of small-arms, who is not at Militia Headquarters.

Canada is now divided into six divisional areas (embracing the whole of Eastern Canada) with headquarters respectively at—

1st Divisional Area	...	London (Ontario).
2nd " "	...	Toronto "
3rd " "	..	Kingston "
4th " "	...	Montreal (Quebec).
5th " "	...	Quebec "
6th " "	...	Halifax (Nova Scotia).

In addition there are the three Military districts:—

Winnipeg (Manitoba).  
 Victoria (British Columbia).  
 Calgary (Saskatchewan).

The divisional organization is of recent date, and consequent on the recommendations of Sir John French in consultation with the late Inspector-General Sir Percy Lake. Its object is that eventually each divisional area should furnish an infantry division of three infantry brigades complete with all its necessary divisional and departmental troops; four of the areas containing cavalry brigades in addition.

Each divisional area is commanded by a brigadier-general, or colonel who has on his staff the following officers:—

General staff officer (2nd grade), lent at present from the regular forces.

Assistant adjutant-general, in charge administration, deputy-assistant adjutant and quartermaster-general.

Attached to the General Staff of each divisional area is a divisional intelligence officer (and his assistants) from the Canadian Corps of Guides, while the departmental staff officers include—

Command Engineer,  
 Divisional Signal Officer,  
 Assistant Director of Supplies and Transport,  
 Administrative Medical Officer, and his staff officer,  
 Senior Ordnance Officer,  
 Paymaster, and  
 Principal Veterinary Officer.

Each infantry and cavalry brigade is staffed by a brigade commander and a brigade-major.

With the exception of one cavalry brigade at Winnipeg, and another at Calgary, the whole of the troops of the three military districts in Central and Western Canada may be said to be at present unbrigaded. The staff of each military district consists of:—

The Officer Commanding,  
 Staff Adjutant,  
 Engineer,  
 Intelligence Officer,  
 Signaller,  
 Senior Army Service Corps Officer,

Principal Medical Officer,  
Senior Ordnance Officer, and  
Paymaster.

The units of the Permanent Force have already been enumerated; it is maintained at an average strength of about 3,000 of all ranks, and its chief duties are:—

- (a) To safeguard the fortresses of Halifax, Esquimalt, and Quebec from a sudden surprise and keep their armaments in good order, at the same time furnishing the nucleus of their garrisons in time of war.
- (b) To provide schools of instruction throughout the dominion for all arms of the service at certain centres, as well as touring instructors for those 'rural' corps who find it impossible to get away to the regular centres. Examinations are held for promotion, and certificates awarded for efficiency.

Some of the officers and a very large percentage of the rank and file are transfers or re-engagements from the Regular Army,—the 'Imperials' as the regulars are generally termed in Canada. Recruiting for the permanent force is no easy matter in such a country as Canada, where labour is at a premium and wages rule high. Moreover, the average Canadian is not fond of submitting to even reasonable discipline.

The only garrison of any size at all is that stationed at Halifax, and, considering the disadvantages under which the force labours, a very fair standard of efficiency is maintained throughout, the Brigade of Royal Canadian Horse Artillery at Kingston being *facile princeps*.

The officers of the force now have to pass the same examinations for promotion as those of the Regular Army, and are allowed to compete for the Staff College. With a view to aiding officers to prepare themselves for these various examinations as well as to raise the standard of education generally throughout the militia, two officers of the General Staff have been specially lent by the War Office and attached to the staff of the Royal Military College, Kingston. These two officers have also to give lectures at the various military centres, the universities, and so forth.

The peace establishment of the Active Militia is fixed in round numbers at 50,000 men, corps being raised by voluntary enlistment. The ballot is allowed by law, but has not been resorted to in time of peace; 100,000 is the number aimed at in case of mobilization. The 'Active Militia' is made up of—

Cavalry and Mounted Rifles—32 regiments and 10 independent squadrons. Each regiment is composed of 4 squadrons, with the exception of three which have 3 only, and the Prince Edward Island Light Horse, which consists of a single squadron: total 118 squadrons.

**Artillery, Field.**—Ten brigades and 4 independent batteries. Each brigade is composed of two 4-gun batteries, and an ammunition column, except two brigades, which have 3 batteries each: total 26 field batteries and 10 ammunition columns. There is also an ammunition park.

**Artillery, Garrison.**—Three regiments. Total 10 companies. Four heavy brigades and one unbrigaded heavy battery. Total 14 heavy batteries.

**Engineers.**—One field troop, 6 field companies, each with a telegraph detachment.

**Corps of Guides.**—Eighty to 90 officers. (Already referred to.)

**Infantry.**—Ninety-seven regiments and 4 independent companies.

Two of these regiments consist of two battalions of 8 companies each. The other regiments are organized in 8 companies each, except one of 10 companies, two of 6 companies, and eight of 4 companies: total 746 companies.

**Signalling Corps.**—Small detachments.

**Army Service Corps.**—Fifteen companies.

**Army Medical Corps.**—Two general hospitals; 21 field ambulances.

**Army Veterinary Corps.**—Small detachments.

With the object of fostering the imperial idea and of encouraging *camaraderie* certain regiments of the Canadian militia are 'allied' to regiments of the regular army, more especially in the case of Scottish units.

The period of enlistment for both the Permanent Force and the Active Militia is 3 years. Re-engagements are permitted under certain conditions.

#### **Terms of Enlistment.**

The Ross rifle is the small arm in use. It is a 5-cartridge magazine rifle, capable of being used as a single-loader, with a bolt action and straight

#### **Arms and Equipment.**

pull. It takes 303 ammunition, and is sighted up to 2,100 yards. The rifle is a good target weapon, but has yet to stand the test of war. The infantry equipment is the Oliver, which can only carry 80 rounds of ammunition and is likely to be replaced before long. It weighs 6 lbs. The total weight carried by a man on service would be approximately 47½ lbs. (In the U. S. A. the infantry soldier carries 58½ lbs.)

The weapon of the mounted corps is also the rifle. The late Inspector-General recommended the adoption preferably of the short rifle with a special bayonet, or alternatively the carbine with sword or revolver. At present only 50 rounds are carried in a canvas bandolier. The saddlery in general use consists of the Universal and Canadian patterns and appears satisfactory.

The field artillery is armed with the 18-pounder Q.-F. gun,—howitzer batteries with the 5-inch howitzer. The heavy batteries are armed with 60 pounders. The siege and coast artillery were



handed over the 9·2, 6", 4·7, etc., guns when the fortresses were taken over from the 'Imperials.'

All ranks of the Canadian militia, including the permanent force, receive, when in camps of instruction, daily rations, or an allowance of 25 cents per diem in lieu, through the agency of the Canadian Army Service Corps. Clothing is manufactured in Canada, the various ordnance depôts being the distributing agencies for clothing and equipment to units. Reserves of clothing and equipment are stored in these depôts.

The Governor-General in Council is empowered to make regulations for the impressment of transport both by land and water, while in time of emergency the railways may be placed under the control of the Minister of Militia and Defence. In peace, for training purposes, the Canadian Army Service Corps arranges to provide sufficient transport from the horses and vehicles owned by local farmers. The owners (or drivers) are properly enlisted as drivers and paid at the rate of 50 cents each per diem, as well as one dollar per horse and 50 cents per vehicle per diem. There exists, too, a system of registration and inspection during peace of horses and transport required for war.

Each field ambulance is organized in three main departments:—

1. The Bearer Division.
2. The Tent Division.
3. The Transport Division.

There is also a sanitary division, which always remains with the headquarters of the unit. The medical store depôts distribute in peace all medical stores, except drugs, which are supplied by local contract.

Some 300 cadet corps are in existence in the Dominion. The Boy Scout movement, too, has taken firm root, while military training in schools is fostered by the Strathcona Trust. All these in combination should do much towards securing the future efficiency of the Canadian militia.

The University of McGill at Montreal is as yet the only one which has fully introduced the system of courses of military instruction similar to those which obtain in the United Kingdom. Several of the universities, however, possess companies in connection with local militia units.

The Royal Military College has been established for the purpose of imparting a complete education in all branches of military science, and in such civil subjects as are necessary to a thorough knowledge of the military profession. In addition to the above primary objects the course of instruction is such as to afford a thorough practical and scientific training in civil engineering, surveying, and physics. Some 35 boys enter the college annually, after a

**Supplies Clothing and Transport.**

**Cadet Corps, and Military Training in Schools and Universities.**

**The Royal Military College, Kingston.**

competitive examination, for a three-year course. The majority of the cadets on leaving go into civil life as engineers, surveyors, etc., some into the Permanent Force, and a selected few into the Regular Army: those who come under the first category are obliged to join a unit of the Active Militia in the district in which they reside, as a subaltern, for a period of three years. The college is held in great esteem throughout the dominion, it being considered a distinct *cachet*, to hold the certificate of graduation.

The arsenal is situated in the city of Quebec. Its principal work is the manufacture of small arm ammunition, and that for the 13-pounder and 18-pounder Q.-F. guns. Some 500 hands are employed, 90 per cent. of whom are French Canadians. Nine hours constitute a working day, and the average output is 1,000,000 rounds of small arm ammunition and 2,000 rounds of gun ammunition per mensem.

The Ross rifle factory is situated on the Heights of Abraham, near the citadel of Quebec. The monthly output varies from 1,000 to 4,000 rifles, practically the whole of which Government takes. About 2,000 private arms are manufactured annually; 325 to 350 hands are employed, 60 per cent of them being French Canadians. Every minute component part is severely tested by the Government Inspector of Small Arms before it leaves the factory.

Nearly all the 'City' units of the Active Militia keep their arms, equipment, and clothing in a Government armoury, which generally consists of a large drill-hall surrounded by company rooms, storage rooms, dressing rooms, anteroom for the officers, etc., while in the basement there is often a miniature range. In large places, such as Montreal and Toronto, there are two or more such buildings, while in others, such as Ottawa, several units make use of the same one, arranging days and times amongst themselves in order to avoid clashing. These armouries, although not constructed on the palatial and luxurious scale of those of the National Guard in the U. S. A., do a good deal towards popularising the militia and thus encourage recruiting, but at the same time the mere fact that there is a large, dry, warm, hall at their disposal, tends to confine the training of the 'City' corps to movements of the 'barrack square' type, and make them loth to leave its precincts.

The great need of the Militia is an adequate supply of properly qualified officers and non-commissioned officers, for there is scarcely a single unit in the Dominion which has its full quota of either.

Though many men are keen and inspire others, it is at least open to question whether the right stamp, of officer, up to the standard of modern requirements, has up to the present time been obtained. They are, no doubt, treated in a niggardly fashion by the Government, being obliged, for instance, to pay heavy duty on their uniforms, and in other ways being put to considerable expense.

The bulk of the infantry is in Eastern Canada, and the men, more especially those belonging to the 'City' corps, look on their regiments to a large extent as social clubs. In this they are probably influenced from across the border, where in such places as New York and Buffalo, for instance, the writer was informed that men would not join the National Guard were it not for the fact that by so doing they were raised somewhat in the social scale, and were, moreover, provided with magnificent armouries and drill-halls, and beautifully furnished company rooms, gymnasia, swimming baths, and so on.

A good many of the infantry battalions in Canada are very fair at drill of the 'barrack-square' type, and are fond of marching through the principal streets in the evenings headed by their band, but were, as a general rule, at sea when asked to practise attack and defence, or outpost duties. This is hardly a matter of surprise when their training only lasts for twelve days a year, two of which are taken up with marching into and marching out of camp, while a third day is a Sunday, thus leaving only nine days really available for work. (In the case of the artillery this period is lengthened by four days.)

The men in Central and Western Canada possess considerable ability for independent action, but such is hardly the case with the type of man who joins the Militia in the east. Again, in Central and Western Canada, there exists almost ideal material for mounted troops among the farmers and ranchers, and some fortunate regiments are almost entirely composed of these men. Given a really keen and hard-working commanding officer and efficient officers, who can prevail upon their men to turn out occasionally in the winter for foot-drill, such a regiment can attain to a really astonishing standard of efficiency by the end of the annual camp.

The western regiments possess a great advantage over the eastern in the matter of horse-flesh. The great majority of the farmers own their mounts, while in the east a large number of the men hire their animals from livery stables and cab-proprietors, with the result that a very heterogeneous collection of all sizes and colours assembles for the annual training.

As regards the artillery it was noticed that the horses appeared somewhat ragged, and taking into consideration the fact that each field gun is drawn by only four horses, they scarcely seemed to be of a sufficiently good stamp.

In conclusion, it may be said that the Canadian Militia is improving every year. The late Minister of Militia and Defence in the Laurier Government accomplished a great deal in the face of considerable opposition and with very limited funds at his disposal during the fifteen years he held his portfolio: the present Minister in the Borden Government is an ardent militia man himself, and is going over in person to the Army Manœuvres in England in the autumn of this year\*, so that we may very possibly expect important developments in the near future.

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\* i.e. 1912.

## FOUR VS. EIGHT COMPANIES.

BY COLONEL W. G. C. HENEKER, D.S.O., A.-D.-C.,  
2ND BN., NORTH STAFFORDSHIRE REGIMENT.

Various articles for and against a change in our infantry organization have appeared in print during the last nine months. I venture to add another to the quota. In submitting this article I do not claim to have discovered anything new. I confess that General Maxse's lecture, delivered at the United Service Institution in London in December 1911, inspired me to study the subject, and since then I have read all that has been published by the advocates on either side. We are repeatedly told that there is no use in hoping for a reform which will cost money greatly in excess of the present sum voted. This being so, I have taken present establishments, and have worked on them. But I think that in order to get the best value out of a four-company scheme, we should have three more officers per battalion, and a few more horses, in order to mount our four majors. At the outside this may add £150,000 on to the estimates (one two-hundredth part of the present army vote), and this addition will, I feel convinced, not wreck the scheme, should the authorities consider it advisable to inaugurate it.

Before dealing with the reform, I would like to say one word of criticism with reference to an article on the subject written by "A Foot Soldier," and published in the July number of the *Army Review*. He balances the advantages and disadvantages of the present organization as compared with one in which the battalion is to be composed of one head-quarter section and four companies, and his conclusion is that the pros and cons about balance one another. I do not admit this, but given, for the sake of argument, that they do, he has left out a very vital "pro" for the adoption of the new organization, namely, the possibility under it, of training in an adequate manner, during peace time, all ranks for the business of war. And this "pro," even admitting that the rest of the arguments balance one another, is a sufficient reason for adopting the new organization.

It would appear that for various reasons which I will touch upon below, it is imperative to institute the change at home, and this being so, it is necessary to adopt a similar organization for the British battalions in India. The British battalion in India, with its higher establishment and fewer "employed men," does not appear so radically in need of alteration as its sister battalion on the home establishment, but the change is needed nevertheless. Every tactical and administrative advantage which will accrue to the home battalion by adopting a four-company system will be experienced in an equal degree should this organization be extended to include the British infantry in India.

In discussing this problem we must first ask ourselves the question: Against what enemy will our infantry be put to the

severest test? The answer naturally will be, "a European one." Therefore European conditions should dictate our organization.

Success in the final stages of a fight will depend to a great extent on how, during peace time, we have trained our subalterns, and more particularly our section and squad commanders, for only these latter are really in touch with the man who fires the rifle. And these leaders, these section and squad commanders, cannot be trained under our present organization as they should be. It is difficult even in India adequately to do so. A subaltern, not to mention a section commander, has no satisfactory command under the present system: the squad commander's unit exists in little more than imagination. But the prestige of the British Empire—I might say our very existence—is going to depend primarily on the home battalions when the expeditionary force leaves the shores of Great Britain to take its place on the continent of Europe beside our ally. As those who are against remodelling our infantry well know, few foreign service battalions will be with the expeditionary force when it mobilizes for home defence, or when it lines up with our allies to maintain the balance of power in Europe. How about the subalterns and section commanders then? Will they know their work? How about the training for command, in initiative, in co-operation? We all know that the junior commanders are not efficient. This being so we must change our organization, and as we cannot have two different systems in the British infantry, India must follow suit.\*

But in order to discuss a reform, it is necessary to grasp clearly the nature and structure of the change meditated. I venture therefore to submit a proposal—a battalion with a headquarter section and four companies; and I have elaborated how such a battalion might be constituted both at home and in India.

Taking such a battalion, let us glance at its advantages.

The primary value of the four company organization is that for war, as for peace, the administration is identical. In both cases the company commander possesses a self-contained unit, with his quarter-master-sergeant for administrative work, and his colour-sergeant for discipline and tactical work. This system is admirable in the cavalry and artillery, and would be so in the infantry. No men are taken from the company every day for outside duties. The company commander has his company intact always. The band, drums, machine gunners, signallers, etc., are no longer an annoyance to him: they belong to a headquarter section administered by the senior major. This to begin with is an enormous advantage from every point of view. Again, the units of the headquarter section should only be *administered* by the senior major. Officers commanding these units—scouts, signallers, machine gunners, etc.,—would have a real command, and should have their men under

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\* There can be no reason why Indian infantry should adopt a new organization if the present one is satisfactory. Of this I am no judge. It is not imperative for them to be organized like British infantry. They have a different organization now and no harm results.

their own orders. Now they have to pacify eight captains and the adjutant if they want something done, for their men are administratively scattered throughout the battalion. The advantages from an administrative point of view are so clear and defined that it is unnecessary to elaborate this point.

Let us look at the tactical advantages in war of the change. A colonel will only have four company commanders to give orders to instead of eight—a manifest advantage. Personal reconnaissance, that all important item, will be facilitated. A hill has to be occupied without delay. The colonel, his adjutant, and his four company commanders gallop off; and by the time the battalion, under the command of the senior major, has come up, each company commander knows his ground, and can quickly dispose his men to advantage.

As for the senior major's command in an attack, it has been stated by advocates of the present eight company battalion—that it is easier for him to control in action four company commanders, each of whom commands 100 men and has in his turn to control two subalterns, than to do so by means of two company commanders, each of whom commands 200 men and has four subalterns. To this I cannot agree. I could not hope, as senior major, to keep in touch, with my captains over a quarter of a mile of front, except by signal, and it is easier to signal to two people than to four.

As for the question of communication within the company, it comes to this, that until the whole battalion is absorbed in the firing line, each company is spread out in depth (the ideal preparatory formation), and control can, I consider, be better maintained in the battalion with the four larger units, than with the eight smaller ones. Do the critics, however, really consider that the captain will be able effectively to command even 100 men within 800 yards of the enemy's position?

Again, I think that even the company commander will find his task easier with the larger company, and will be able to influence the fire fight more materially, for he will be in a position to keep a considerable body of men under his hand as a reserve, say a section (about 40 men). Only through the action of reserves can any commander much above the rank of section leader influence the fire fight when in close touch with the enemy.

Critics say that the continental armies, for tactical reasons, are against the four company organization. If so, why do they retain it? They also state that the Germans found it less efficacious during 1870-71 than was at first supposed. They refer to the pamphlet "A Midsummer Night's Dream" as bearing out their remarks. This pamphlet, as I read it, is filled primarily with a discussion as to the merits of close *vs.* extended order, and as to which method gives a commander more control over his men. I am open to correction, but I did not find in it that any case was put forward for abolishing the large companies. The Germans after the war certainly complained that large companies gave their commanders such increased responsibilities that these commanders very often brought on premature

actions. But surely the critics do not consider that dash, the assumption of responsibility, and the golden gift of initiative should be condemned and stifled. As a matter of fact the German higher commanders during that war remained too far in rear, and could not control the opening phases of an action. *They* were wrong, not the company commanders who attacked the enemy. Our regulations are clear on this subject (F. S. Regn., Part I, section 101 (4).) So are the German books now.

It has been said that the larger company does not lend itself to outpost work; but I am at a loss to understand the grounds for this assertion. Should a full company not be required for any work, its organization will permit of its being split up into half companies or even of sections being divided into squads. The larger company, with its sentries, piquets, and supports covering a certain area of country, has far more cohesion under its one commander, than two of the present companies under their separate commanders.

With regard to other aspects and advantages of the proposed change—both those which bear upon the tactical handling of a battalion and companies in war, and those relating to the training of these units in peace—a summary of them, added to a short account of the organization proposed, should suffice to explain my point.

*Some disadvantages of the present system and some advantages of the proposed system, other than those already touched upon.*

- (i) With eight small companies, the company is not strong enough to be the tactical unit, so the battalion really becomes so (compare the French in 1870).
- (ii) In the attack, large companies can be disposed "in depth" better than small companies.
- (iii) Large companies avoid the mixing of small commands for a longer time.
- (iv) A large company is a real self-supporting unit, with stable command, on which the commanding officer can safely decentralise.
- (v) The *raison d'être* of companies of 100 men in the past, viz., the greatest number which one man could control in action, has disappeared. Thus, companies need not be limited in size in order to satisfy this requirement. It is as impossible now personally to command 50 men in the fire fight as 200.
- (vi) Baggage and supplies can be more conveniently distributed by having four companies.
- (vii) The advantages of having a quartermaster for pay, clothing, etc., and a colour-sergeant for discipline and training, are very apparent.
- (viii) Clerical work in the orderly room and with companies would be greatly reduced.
- (ix) A major would have a real command to administer and train.

- (x) At present promotion inside the company is the exception. A larger company means a larger selection, and thus transfers will to a great extent be avoided.
- (xi) A non-commissioned officer is entrusted with command of a unit in war. *He should train it in peace.* With the proposed organization he will be able to do this.
- (xii) The big company would facilitate leave rules and the command of companies. 2nd-lieutenants now have to be placed in command of a company temporarily during the leave season. This is a very bad and unsound arrangement. There are other numerous advantages, but I think I have enumerated sufficient for our purpose.

Before outlining my scheme there is one point I must mention, the only one which I think is at all open to discussion. This is the proposed status of the captain, and this at first sight appears a retrograde step. Only at first sight however. To be an advantage, a fresh reform must be brought in, and that reform is "selection." Company commanders should be specially selected; and keen, energetic young captains should be given special promotion as company commanders in another regiment. This course would open a fresh horizon for the regimental officer, and I am sure would not only be welcomed by all keen men, but would produce company commanders of a new stamp. There is a great deal too much of the "promotion-for-being-alive" rule about our army. The authorities have lately given the system of special selection for the appointment of commanding officer a new lease of life, and I think it now should go down to company commanders.

Let promotion go by seniority up to captain: a man by that time should have thoroughly learned his work. Thenceforward it should rest with him whether he ever gets command of a company or not. An exceptional man might go from junior captain of one regiment to command a company in another regiment. This system works well in the cavalry and artillery.

What we now want is to try and evolve an organization which will give us the best training during peace time, with our present peace establishment, but one which can be expanded at once, without dislocation, to suit war establishments. In other words let us try to fashion the framework of a structure which will be so complete that it will only require to be filled in to give us the finished article.

Whatever the adverse critics of Lord Haldane's territorial army scheme have to urge, they one and all confess that the framework of the perfect structure has been formed. The organization of the divisions, brigades, and regiments, with their necessary staff, etc., exists. The rank and file only are required to complete the organization. This we must try and do with our battalion.

I may say to begin with that any reform which reduces the proportion of officers to men I strongly deprecate.

Now we must organize the battalion so that its framework will be absolutely complete for war, and we must keep it so during peace



time, otherwise training will suffer, and our structure will consist of a collection of materials which will not be put into place until mobilization is ordered.

The above principally refers to our home establishment. I have appended three proposed establishments :—

Table 1.—Peace establishment at home.

Table 2.—War do. do.

Table 3.—Indian do. for both peace and war.

Tables 1 and 2 do not concern us at present in India, but the ideas can easily be grasped from the tables

Table 3, as it applies to India, I will touch upon.

*Majors*.—Four majors are the present establishment, five are required; therefore one captain must be promoted, leaving us with four captains, the exact number we want. Majors in the futures should be seconded; this will tend to efficiency, but even were this not done, we have a captain to take the major's place.

*Subalterns*.—Here is the first trouble. For a perfect scheme we want four per company; that is, 16 for the four companies. Added to these we want a signalling officer, a machine gun officer and a transport officer; making 19 in all.\*

The establishment gives us eight lieutenants and eight 2nd-lieutenants or 16: so we are three short. Here comes the question. Is the Government going to give us the money for our increased establishment? Or are we going to carry on in the present unsatisfactory manner, under which companies are drained to supply these officers?

*Quartermaster-sergeants, colour-sergeants, and sergeants*.—The establishment gives us 45 of every grade. How many do we want? The headquarter section requires—

- 2 quartermaster-sergeants.
- 1 colour sergeant.
- 1 orderly room sergeant.
- 1 sergeant drummer.
- 1 pioneer sergeant.
- 1 sergeant cook.
- 1 transport sergeant.
- 1 signalling sergeant.
- 1 scout sergeant.
- 1 band sergeant.
- 1 officers' mess sergeant.
- 1 police sergeant.
- 1 machine gun sergeant.
- 5 permanent employ sergeants (half the number *vide* Table 3).

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Total 19

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\*A transport officer is not now required at home for service. The machine gun officer can supervise the stables during peace time.

Companies require—

4 colour-sergeants.  
4 quarter master-sergeants.  
16 sergeants.

Total 24

19

Grand Total 43

Therefore 2 sergeants are saved.

*Corporals.*—Headquarter section requires :—

1 orderly room corporal.  
1 signalling corporal.  
1 machine gun corporal.  
5 permanent employed corporals.

Total 8

Giving a corporal command of two squads, we shall require eight corporals per company, or 32 for the companies; thus 40 for the battalion. The present establishment gives us 40, so our corporals are correct.

*Lance-corporals.*—The present establishment gives us 48. We shall want 64. We have two sergeants surplus, therefore we must take 14 from the privates, and these might be on the unpaid list.

*Privates.*—The establishment is 900 (852 privates plus 48 lance-corporals).

If we give each company 161 it will bring us to the same total as the present establishment, *viz.*, 1,031. This number will give us four sections of 40 men in each company. Each section will have its own 2nd-in-command (a sergeant) and will be composed of four squads of 10 men. Each squad will be commanded by a lance-corporal. Every two squads (20 men) will have a corporal in command.

The captain, for any special occasion, can be given the command of two sections (80 men), or he can remain as 2nd-in-command to the major, while the senior of the two subalterns takes the half company. An elastic organization—the seniors in every case have a 2nd-in-command to replace them if necessary, and each officer exercises an adequate command according to rank.

Musketry and training should be carried out by the non-commissioned officers and men of the headquarter section. They must certainly be capable of taking their places in the ranks.

The above is a bare outline of the scheme. Various questions must arise for discussion, one is the question of the band at home and in India; but these need not be entered into in this paper.

What I maintain is, that with such an organization, all ranks, from the colonel to the squad commanders, will learn their duties during peace time with the identical unit which they will be called upon to command in war.



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# A PLEA FOR COMRADESHIP IN THE ARMY IN INDIA AND A SUGGESTION TOWARDS ITS ATTAINMENT.

BY CAPTAIN R. J. INGHAM, R.A.

## PART I.—THE PLEA.

A periodic crisis in the affairs of Empire is as inevitable as a thunder-storm in the monsoon. The great empires of the past experienced them, and survived, perhaps strengthened by the test, or succumbed, according to the play of circumstances that historians call progress and theologians call Providence. The history of our own Empire is no exception. We have survived the rupture with our American colonies, we have survived the Indian Mutiny, and we hope, in like manner, to survive further tests of our fitness to rule and to progress. These crises are rarely without some measure of warning, and, however strong our faith in the star of our Empire, it is surely rash to neglect the warnings and to hesitate to take steps to prepare for the danger before it is actually upon us.

There is no need to labour the point. No student of contemporary politics will deny that the signs of the times point to our Empire being faced again with at least the strong probability of another crisis both in Europe and in the East. With the world contracted by rapid communications it will no longer be possible to confine the effects of the outburst to the area in which it originates. A war with a foreign power, for instance, would undoubtedly make its disturbing influence felt in the furthestmost ends of our eastern Empire, and, conversely, a disturbance on a large scale, of the equilibrium of our Indian Empire, would exert adverse influence on our foreign policy in Europe. A few weeks ago Sir Edward Grey emphasised the root fact of diplomacy, namely, that to reduce the armed forces of empire below a certain standard, even for a short time is to lay upon foreign policy a weight that it cannot well support. Accepting then that in the west the probability of a crisis is increasing day by day, and that in the east signs are not wanting of disturbing factors, and that the outburst wherever it originates, will have effects which will be empire-wide, it is surely time to review each and every weapon in our armoury. This article proposes to deal with one such factor only, namely, the relations between our British soldiers, officers, and men in India and their Indian comrades.

For many years after the Indian Mutiny the British in India had a halo of invulnerability that rendered their position unchallengeable. Since the Russo-Japanese War, however, the Indian press and the Indian educated classes no longer invest European armies with omnipotence. Whether they are right or

wrong in their estimate is, so far as the purpose of this article goes beside the point. The crux is that their change of attitude renders disturbance more probable. It behoves us to remember that the next problem we may have to face in India is not merely the conquest of some frontier tribe, ill armed and ill organized; nor even a war with our Afghan neighbours; but the more serious contingency of the latent discontent with our rule taking an active form. Both Nationalists and the Indian Government recognize that so long as the Arms Act is enforced, the danger arising from the discontent of a few irreconcilables can not amount to much. Officials may be assassinated: they can be replaced. Riots may disturb trade: but trade will survive the disturbance, and in time will bind India more closely to the Empire. Without armed force the Indian agitator is, after all, little more dangerous than the British suffragette whom he so closely resembles in speech and action.

But if sedition once got a hold on the mass of the Indian people, which is most improbable, the problem would become more difficult. We could face the local issue with confidence, but the process would inevitably cause loss of property and trouble. Though a second mutiny is out of the question, a widespread insurrection would weaken our position on the north-west and north-east frontiers, and put a severe strain on the undoubted loyalty of many.

What then is the remedy? How are we to strengthen the loyalty and devotion of our Indian fellow-subjects, and more especially of our brothers-in-arms? Surely the answer is by a better understanding of their feelings and ideas, and by closer comradeship between Indian officers and soldiers and British officers and soldiers—a comradeship that exists in all good regiments and will resist the efforts of agitators. Such an understanding will go far to destroy petty jealousies, will reconcile conflicting interests, and in the army will rise superior to *esprit de corps* and seek its expression in that *esprit d'empire* which is the truest patriotism. *Parturiunt montes, nascetur ridiculus mus* will, no doubt, be the criticism when my solution to the problem of how to obtain this comradeship is indicated. For, to the mind of the writer, there seems only one direct means—a far more general and developed knowledge of the languages of India. After all, language is the one means of communication of ideas between human beings. Sympathy and comradeship can only come when human beings meet on the common ground of mutual understanding of ideals and aims. I maintain that without a thorough working knowledge of the language of the people of India, all efforts to obtain comradeship between British and Indians are doomed.

Imperialism and patriotism are ideals that shine brightly before all officers of the army, but to give these ideals effect by arduous study of an uninteresting language, appeals to few. Many would willingly die for their country who would scorn, with the same object, to learn a list of irregular verbs. It is no new story, yet for Naaman there was healing in the waters of Jordan.

## PART II.—THE SUGGESTION.

Without placing undue value upon the present examinations as tests of linguistic efficiency, still, these examinations afford at present the only available guide as to the extent of the efforts that officers are making to learn the languages of India. The mere passing of the examination is, admittedly, not sufficient to secure even a working knowledge of the language, but it is the foundation, and upon that foundation alone can be built the edifice of comradeship, by fuller opportunities of meeting and knowing the rank and file of our Indian comrades in arms. It is proposed, therefore, before suggesting remedies, to investigate how far officers of the various arms have passed the language tests and what opportunities they at present possess of meeting Indian soldiers. Interest will be added to this investigation if an attempt is first made to see at what points the British and Indian services are in contact in times of peace and what peculiar conditions may arise on active service which will bring them into even closer touch. This may best be done by considering each arm separately.

A reference to the Indian army list will show that the majority of R. E. officers are, practically speaking, Indian Army men; they have elected for continuous Indian service and will eventually draw an Indian pension. The three corps of Sappers and Miners account for one-fifth of the officers; the remainder are divided between the M. W. S., the railways, and the P. W. D. All have to deal directly with natives. This being the case, the passing of a language examination has been made obligatory. In the Sappers and Miners the test is the H. S. Hindustani, in the other branches it is the L. S. Hindustani, or its equivalent in a P. W. Departmental language test. Captains and subalterns are required to pass the examination within twelve months of first landing in the country; if, after this time, they fail to pass they lose "charge pay" from date of landing until such time as they do pass. For major and colonels the time-limit is only six months; the more senior the officer and the more "charge pay" he draws, the sooner he is expected to pass. This rule applies equally to those officers who are not "permanent Indians." It may, therefore, be stated that the officers of this corps are for all intents and purposes a part of the Indian Army.

In the R. G. A., the gap between the British and Indian services gradually widens. Of this branch of the artillery one-sixth of the officers belong to the Indian Ordnance. These are on the same footing as the "permanent Indian" sapper, they draw Indian rates of pay and qualify for Indian pensions; they are also required to pass the H. S. Hindustani to enable them to draw "charge pay." We next pass to the officers of the Indian mountain artillery, who comprise one-fifth of the garrison artillery officers in India. The units to which they temporarily belong are a portion of the Indian Army like the sappers and miners, but the officers are not permitted to elect for

permanent Indian service. Consequently they draw Indian pay, but not Indian pensions. They too are obliged to pass the H. S. Hindustani. Another fifth of the garrison artillery officers belong to the British mountain batteries and to the heavy batteries, in both of which the driver personnel are natives. These officers are expected to pass the L. S. Hindustani and the majority of them do so. Of the remaining 130 officers some 20 are seconded on the staff, etc., and the other 110 are employed in coast defence. Among these latter are a number of ex-mountain gunners who have passed one or other of the Hindustani examinations. For this branch of the R. G. A., no language qualifications are demanded, though a link has just been formed connecting it with the Indian Army; the old fort lascars have been reconstituted into a corps of Indian coast artillery and a fighting class of native is being enlisted. Of the R. G. A., it may therefore be said that the language qualifications expected from its officers are up to the standard required by its close connection with the Indian Army, with the possible exception of the coast artillery.

In the horse and field artillery the connection with the Indian Army is similar to that in the coast artillery, and is supplied by the Indian personnel of the ammunition columns. The formation of these units signalled a great step towards preparedness for war, but their duties in peace do not appeal to the keen regimental officer, as they are for the most part administrative and generally dull and prosaic. On service these duties would be equally prosaic though probably arduous. Appointment to an ammunition column is therefore the reverse of popular, although it carries with it an increase in pay. Be this as it may, at least a quarter of the subalterns of the field artillery in India have to serve a term in an ammunition column at one time or another. Considering then that, except for a nucleus of British rank and file, three-quarters of the personnel are natives enlisted as fighting men, the necessity is evident for the British officers to have a knowledge of native languages and to be able to talk to their men and understand them; yet this is in no way enforced with what results will be seen later.

In the R. A. M. C., the conditions are very similar to those just described. In addition to the ordinary medical establishments of the hospitals medical officers have to command in peace and in war the personnel of the A. H. and A. B. Corps. Unfortunately at present the latter corps scarcely exists; but in war its administration and command would demand that the officers in the ambulance columns should not rely entirely on the assistant surgeons but that they themselves should be able to speak Hindustani. It is, moreover, recognised that the hard-and-fast subdivision of medical attendance between British and Indian ambulances is impractical on service and that all ambulances, British and Indian, must be prepared to look after any man brought into them for treatment on the battlefield. Under these circumstances it is as important for R. A. M. C. officers to be able to speak Hindustani as it is for officers in the combatant

arms of the service. But it will be noted that there is neither obligation nor inducement for them to do this beyond their own inclination.

In the British cavalry and infantry the conditions are different to any of the foregoing. Instead of Indian units being attached to and forming part of either of these two British service arms, contact with the Indian Army is only gained inside the war formations of the cavalry and infantry brigades. Under present peace conditions this contact is imaginary rather than real. On manœuvres and during training care is taken that British and Indian units shall not mix, that their duties or work shall not overlap; British units are taught to be entirely self-sufficient and self-contained. But on service, other than on minor frontier expeditions, this detached attitude would be impossible, especially during those crises to which infantry and cavalry are naturally exposed. In the attack, defence, or in any other tactical operation circumstances are certain to arise under which units of the same brigade or division will become for a time inextricably mixed. If, at such times, the officers of the British regiment, cannot speak to or understand the Indian officers or senior Indian non-commissioned officers who may pass under their command, and cannot perhaps direct their fire or get them to rally, disaster may result. Again in the cavalry the necessity for language proficiency is even greater than in the infantry, since one of the first duties of this arm is reconnaissance. A British cavalry regiment employed on this duty in India or beyond the Indian frontier, whose officers were unable to talk the language would be hopelessly at sea, for not only would it be almost impossible for them to collect information from the inhabitants, but they would be unable to interrogate or to understand the reports of the patrols sent out from the Indian regiment of their own brigade. This question has always been serious, but latterly its importance has increased since it is rumoured that one of the proposals into which the Nicholson Committee will enquire is the reduction of the number of British officers in Indian regiments. If this proposal is approved, it will be most important that the officers of British cavalry and infantry shall be able to take command of Indian troops in cases of emergency.

It is hoped that these remarks will have shown how close is the interdependence between the British forces in India and the Indian Army, and that the importance from an utilitarian point of view of language proficiency for British service officers will have been made clear.

It is proposed to see now how far officers of the British service are at present qualified in native languages. This may readily be done by turning again to the Indian army list and by finding out the percentage of officers in each arm who have passed language tests. Once in possession of these figures, some definite conclusions may be reached.

These figures are given in the following table, which is based on the Indian army list for July 1912 :—

TABLE OF LANGUAGE PROFICIENCY IN THE BRITISH SERVICE.

Arm or service.	No. of regiments	No. of officers shown as serving in India.	No. OF OFFICERS WITH LANGUAGE QUALIFICATIONS.			Percentage of officers with language qualifications.	Number of officers per regiment with language qualifications.
			H. S. Hin- dustani.	L. S. Hin- dustani.	Other languages.		
1	2	3	4	5	6	7	8
Royal Engineers ...	...	374	157	?	...	90	...
R. G. A. ...	...	345	222	43	...	77.7	...
R. H. A. and R. F. A. ...	...	374	67	48	3	31	...
Br. Infantry ...	52	1,557	172	250	13	28	8.3
R. A. M. C. ...	...	330	12	63	2	23.3	...
Br. Cavalry ...	9	213	10	11	3	11	2.6

REMARKS: 1. Column 2.—In this column are included those units which arrived in India during last trooping season, 1911-12. This is necessary to ensure a just comparison with the other arms.

2. Column 3.—Includes all officers seconded in India and officers of British infantry at home at the regimental depôts. The omission of the latter officers would not appreciably alter the infantry average in column 7, though the figure for this arm in column 8 would fall to 7 in an average strength of 26 officers per regiment.

3. Column 6.—This column shows the number of officers who have not passed either the H. or L. S. Hindustani examination, but who have passed some other useful oriental language test. The Elementary Pushtu and the L. S. Pushtu, Baluchi, and Persian are not included as "useful" language tests.

. The first thing that will be noticed in this table is that every officer (except the 21 officers in column 6) who has passed in more than one native language, has passed as one of his languages either the H. or L. S. Hindustani. This may be accounted for partly by the fact that under Army Regulations an officer is not permitted to present himself for examination in H. S. Persian or Arabic if he has not previously passed the H. S. Hindustani, but this regulation does not apply to other H. S. examinations. In other words, practically every officer who can talk a native language at all can also talk Hindustani. This language is the old *lingua franca* of the Army in India. With this object the Indian officers and senior non-commissioned officers in most Indian units are expected to talk Hindustani, and the majority can do so, shall we say, at least as well as the average British service officer who has passed the H. or L. S. ?

The important column of the table is of course No. 7. Bearing in mind the conditions of service in each arm, it will be noted that the number of passes varies according to three factors ; firstly the obligation to pass, secondly the inducement offered for passing, and lastly the closeness of the connection with the Indian Army. It will be noted immediately that the language rewards are not included amongst these three factors, for it is a matter of common knowledge that the rewards giving for passing the Higher and L. Standard Hindustani do not compensate for the expense incurred.

As regards the first two factors it will be remarked that percentages are highest where obligation is imposed along with a high monetary inducement as, for instance, with the Royal Engineers, the Indian mountain artillery and the Indian Ordnance Department. It is, moreover, to these factors that is to be attributed the high percentage of the British infantry compared with that of the cavalry ; for there can be no doubt that a large number of the passes in the infantry are due to officers who have at one time or another applied for the Indian Army. Now that admission to the Indian Army is only possible direct from Sandhurst and the Universities or the Special Reserve there must be several subalterns of British infantry in India who regret the money which they regard as wasted on their munshis in a fruitless attempt to qualify before this rule was enforced. The British infantry percentage may therefore be expected to dwindle gradually during the next few years, unless steps are taken to encourage language proficiency. In the British mountain artillery partial obligation is coupled with the inducement of a popular service, to join which officers are ready to sacrifice pay : but this condition is peculiar and could not be applied to any other branch of the British service in India except perhaps to the horse artillery.

That the third factor, the high moral one, operates but weakly is obvious from the percentage of the horse and field artillery and of the R. A. M. C., no less than from the fact that out of 47 officers



now serving in ammunition columns only 8 have passed the H. S. and 9 the L. S. Hindustani.

There is perhaps one other factor which affects the percentages, and even this takes the form of obligation coupled with inducement. This factor arises either when, for financial reasons or because of fondness for sport which he would not get at home, a British service officer decides that he will serve as much of his time in India as possible. Such an officer realises that for his own comfort he must learn something of the language. This inducement does not affect the man in British cavalry, and it is for this reason that the British cavalry percentage may be taken as representing the average that voluntary effort unassisted by obligation or inducement will achieve. On the other hand, it is be noted that in the British cavalry the standard of proficiency in European languages is high, and though French and German are useless on service on the plains of India or in the valleys of Afganistan, this proficiency points a useful lesson. If reference be made once more to the Indian army list, it will be seen that proficiency in a European language has been treated as a matter of importance in three British cavalry regiments. Obviously in these regiments the influence of the commanding officers has been exerted in the matter, and officers have been given to understand that it was their duty to prepare themselves for active service in Europe. But it is feared that this broad view is rarely taken of the moral obligation resting on officers to learn native languages in India: at least the figures do not show it.

From these facts and arguments the following deductions can be made:—

- I. Language proficiency in the British service in India is at a dangerously low standard in view of both peace and war conditions in the east.
- II. Hindustani must be the language in which general proficiency is necessary.
- III. The present low rewards for passing H. and L. S. Hindustani are valueless as an inducement to pass.
- IV. The best results are secured where obligation is coupled with a permanent monetary inducement in the form of a higher rate of pay dependent on passing within a fixed time limit.
- V. Voluntary effort unassisted by obligation or inducement is unreliable, though more might be expected if the principle were established that all general and other officers commanding should exert their influence, (or in other words a healthy pressure,) to get officers to go up for these examinations.
- VI. Obligation might be carried further than it is at present by establishing a rule that no officer is to hold an appointment as A.-D.-C., S. S. O., adjutant of volunteers, or commandant of a hill depôt, unless he has already passed the H. S. Hindustani. As these appointments

carry with them monetary or social inducements, obligation and inducement combined would have the desired effect.

- VII. Even without other inducement direct contact with natives acts as a mild inducement to a small percentage of officers to learn the language.

In face of these deductions it should not be difficult to suggest a plan for improving the state of affairs. It will at once be admitted that the necessity for increasing the pay of the British service officer is becoming more pressing every day and that some concession in this direction must soon be made. It will therefore at once occur that in India a concession of increased pay should be made conditional on language proficiency. On the principle adopted in the case of the R. E. and of the officers on the Indian ordnance, it could be provided that an officer must pass the L. S. Hindustani within twelve months of landing in the country; should an officer fail to do so he should not only lose his extra pay but he should also forfeit back pay since date of landing. The introduction of such a rule would be simple: for all officers with more than twelve months in the country the time limit could be fixed at six months, while those with less service in India might be given the full year. Such action would automatically settle the question. This proposal would have the effect of freeing the sum now spent annually in L. S. rewards to meet in part the extra cost involved by the proposal. Concurrently with the introduction of this rule the passing of the H. S. should be made obligatory for those minor staff appointments to which attention has already been drawn.

An objection to this proposal, to the effect that it contemplates the addition of another examination fence to the many already placed across the course of an officer's professional career, cannot be accepted. The examination already exists and is successfully negotiated every three months by fresh batches of aspirants for advancement or higher pay. Moreover, the passing of this language examination is a small return to make for the concession of an increase of pay, and it would always remain open to a conscientious objector to abstain from the examination and to forfeit the pay.

But these proposals do not provide for more than the establishment of a universal standard of language proficiency; they have not yet dealt with the larger questions as to how this proficiency standard is to be maintained, or how it may be used to bring the British and Indian services into closer touch; for, as has already been pointed out, a language examination is only an educational means towards these much greater ends. Practice makes perfect, and the student of a language must himself seek for, and should be given, every opportunity for practising its use. More often than not pupils require these opportunities to be made for them and have to be forced to take them. It is therefore suggested that in this case voluntary effort might be quickened by a colloquial test attached to the present promotion examination to captain and major for those

officers who have passed more than twelve months before going up for promotion.

However, to solve the question completely, one need only turn to the principles already applied to secure co-operation in the field. In this case the solution has been the "attached course." On these courses officers are attached to arms of the service other than their own, so that they may learn their ways and may appreciate the difficulties with which they have to contend. This is the exact situation with which we are confronted when dealing with the racial question in India and it is by the "attached course" that our present difficulty may best be solved. At present attached courses are for periods of two months; but it is now recognised that this is too short a term. For officers passing through the staff colleges the course will probably soon be extended to six months. Similarly two months is insufficient for an officer to study not only the interior economy of a native unit but also the native sepoy and his language. A six months' course would be of some value, but to get the best results the course should be for a year. This would give the attaché every chance. In the hot weather he could get hold of the details of interior economy, and in the cold weather of training. During the whole of the attached course the officer would be exercising his Hindustani or learning Pushtu, Punjabi, or the language of the class recruited in the double company to which he was attached. He would be getting to know the native, his customs and manners, and would learn how to treat an Indian officer or other Indian gentleman. At the end of the course his prejudices would be removed, his outlook would be broadened, and his value to the Empire would be doubled. The happiest results are to be expected from such attached courses, for not only would they have these beneficial effects on the officers of the British service but also nothing but good is to be expected from bringing Indian officers into close touch with a wider circle of British officers. Thus a great step would be taken towards ensuring that good feeling throughout the army in India which is so essential to comradeship and, therefore, to true co-operation.

A year's attachment is a long term and many objections will at once be raised to such a proposal. But from Note 2 to the table it will be seen that the average number of officers present with the British infantry or cavalry regiment is 25, including those on leave but excluding those at the regimental dépôt, on the staff, or otherwise seconded. On the other hand, in an Indian regiment the present establishment of British officers is 14, and there are in India nearly three and four times the number of Indian infantry and cavalry regiments than there are of British regiments of the corresponding arm. The natural method of procedure would therefore appear to be to take one officer annually from each British infantry or cavalry regiment and to attach him for the year to an Indian regiment in the same brigade; in a small proportion of cases officers might be attached to a different arm of the service. This

officer would be replaced in his own regiment by a British officer from the Indian unit to which he is attached. Thus neither unit would suffer as regards strength of British officers present, and leave would not be affected. By this means a fixed number of British service officers would be passed through the Indian army annually, so that at the end of a tour of Indian service quite half the officers in a regiment should have got a good working knowledge of the Indian army and the sepoy. On the other hand, a proportion of the officers of the Indian army would benefit by a second taste of service with British troops and by regaining touch with British service ideas. Moreover, Indian regiments would only be inconvenienced by parting with one of their few British officers once in every two or three years. Finally both services would benefit by the constant exchange of ideas, and the forces of self-sufficiency would be diminished.

Doubtless these proposals are susceptible of much improvement, but it is maintained that the underlying principle is correct and that on these lines much may be done both to improve the army in India as a fighting machine and to consolidate our rule. It has been shown that the attainment of these ends primarily depends on language proficiency on the part of the ruling race; that at present in the British service the obligations and inducements to officers to qualify in native languages are insufficient where most necessary to real efficiency; that an increase of pay rather than a meagre reward is the surest means of attaining this end; and that once this language proficiency has been established opportunity must be given for practice to make perfect, and that this may be effectively done by a system of attached courses. Stress has been laid on the indirect benefits likely to result as well as on the immediate utilitarian advantages, and in conclusion it will be well once more to emphasise these indirect benefits. It is felt strongly that comradeship can only be attained by intercourse, and that before this feeling can take firm hold on the rank and file an example must be set by the officers. It is maintained that if such intercourse is made widespread and friendly, the fighting efficiency of the Army in India in general and the loyalty of our Indian forces in particular will increase. By this means alone will our mixed army become animated by a spirit of confident co-operation founded on mutual goodwill, a moral asset capable not only of resisting the forces of unrest and sedition, but also capable of bearing the strain of the severest trials in the field. With such an army at our backs we can await our future, confident in ourselves and in our destiny to rule wisely and to hold.

**NOTE.**—In an article published in the "Pioneer" of August 12th, 1912, "Examining Officer" made a suggestion that every officer before going up for the H. or L. S. Hindustani should spend a few days in a native village living with a native gentlemen. Incidentally he called attention to the well known fact of the pleasure with which Indian officers welcome to their villages British officers who can converse with them. The principle underlying this article was the same as that elaborated above, namely, that language proficiency and opportunities of intercourse are necessary to promote comradeship.



## TWO INVENTIONS FOR LANDSCAPE TARGETS.

BY COLONEL F. A. HOGHTON, 69TH PUNJABIS.

### I.

#### **Adaptation of the Ordinary Landscape Target so as to show Visible Targets when required.**

The main idea of the Hill-Sifken landscape target is to train your leaders and men to describe and to fire at natural objects. I have found that this description of practice, though most useful, is apt to become monotonous. As a variation, therefore, I have adopted the system described in the attached drawings, and have found that the men take considerable interest in it. The advantage is that the picture can be used with or without visible objectives.

Targets can be introduced practically *ad lib.* They should be made to scale and perspective, but this is easily arrived at with a little practice, *e.g.*, a train crossing the viaduct would be on a smaller scale than, say, a quarter column moving in the direction of the firer between 3 and 2 in Fig. I. In the same way a battery of artillery coming into action on hill B (Fig. I), would be small in proportion to a squadron of cavalry galloping across from A' to A" (Fig. I). The advantage of working these in proportion is that your N.-C. O.'s and scouts can (and indeed have to) use field-glasses to see a target appearing at long range, say, on ridge B or 5 (Fig. I).

To prepare the picture, the landscape must be carefully and evenly pasted on to a large sheet of stout mill-board or tin. When dry, it should be cut into strips along certain marked lines or features as shown in Fig. I (this is done with a very sharp chisel, razor, or tin-cutter). Each strip should be braced with one or two light wooden battens at the back, otherwise it is inclined to buckle and warp. The strips are then fixed into a frame as in Fig. II, one behind the other, the top of each strip coming into its proper place in the picture so that, from the front, the picture will appear to be untouched. Running along the back of each strip and near the top is a ledge, Fig. III, upon which all the different targets (except the moving targets) are fixed to appear and disappear. Moving targets are fixed on double wires invisible to the firer, Fig. IV. Here the squad of infantry appear on the right of the wood A' and disappear behind the slope above A". Targets are worked by means of strings and pulleys from the sides, and can be varied at the will and the ingenuity of the constructor. For instance, a good representation of an infantry column or quarter column can be made on an oblong of khaki drill, with black dots in lines to make it more conspicuous. This could be made to appear over the ridge

in Fig. I at C, and move slowly down into the cover of the viaduct. A line of skirmishers can suddenly appear over hedge at 3, Fig. I, or a railway train can be made to cross viaduct at 4.

Marking is carried out on the same principle as for Hill-Sifken targets. All appearing and disappearing targets, also moving targets, must of course be timed with whistle, and hits forfeited for shots fired after the whistle has sounded. Marking for targets appearing in one place is simple, as their *habitat* can be marked on the outline target and the usual oblong or circular areas measured off by means of wire framing as for grouping practice, or an outline of the actual target or targets can be marked on the skeleton target. Marking for moving targets is more difficult, but is effected by means of a facsimile of the target in outline on a piece of white card-board, which is adjusted to move across the corresponding area or locality in the skeleton target, and at the same pace, the targets on both the landscape and skeleton panoramas being worked simultaneously from the sides, *vide* Fig. VIII. On the actual picture the moving target moves along the back of its particular strip: on the skeleton target it moves along the *front*, as this is not cut into strips.

As regards the manipulation of targets, they should be made to assimilate with service objectives (*i.e.*, khaki guns and men should be utilised), and they should not be raised with a jerk so as to give away their position. Field-glasses should be freely used by commanders.

The total cost of this contrivance is about Rs. 25.

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## II.

**The Houghton-Hanson Optical Lantern Landscape Target.**

Attached are some drawings showing how an ordinary magic (optical) lantern can be utilised for the purpose of providing an unlimited variety of landscape targets. The advantages of this target are :—

- (a) The shots are registered on the picture itself without doing it any injury.
- (b) The preparatory tuning of targets necessary with Hill-Sifken targets is done away with.
- (c) The firer sets his sights to close ranges, and the inconvenience and strain attached to the constant use of long range sights is done away with.
- (d) An infinite variety of landscapes can be utilised by means of photographic slides, and ordinary panorama sketches lightly painted in on slides, see Fig. VII. A regiment quartered in Trichinopoly can practise shooting at natural objects in frontier hill country and *vice versa*.
- (e) The men have to set their sights in the dark which is excellent practice.
- (f) All the labour can be provided regimentally and is excellent practice for the men in excavation, revetment, and splinter-proofing.
- (g) The gallery is invaluable in wet weather and on long winter evenings for training purposes.
- (h) With a 10-foot picture the system of clock and finger measurement for pointing out natural objectives can be freely used.

As regards the lantern and lighting, the lantern should be a good one with a 300 candle-power spirit lamp (Meta) at least. Such a lantern with about 50 slides can be purchased for £12 from Messrs. Ross, Ltd., Cockspur Street, London, S. W.

At home where lighting facilities are good and cheap, electric light could be utilised and would give far more brilliant pictures. For instance, with a 300 candle-power lamp, and using a full tinted English landscape slide, where dark browns and dark greens predominate, it is difficult to see the sights against the picture. This would not be the case with a 2,000 candle-power electric lamp. For photographic lantern slides a light yet sharp negative should be used. Against such negatives or against lightly-tinted panoramic slides the sights on the rifle stand out well.

Appearing and disappearing targets, and timed exposures, are best worked by means of a collapsible white cloth screen, see Fig. V. The screen is timed, *i.e.*, suppose exposure for five seconds is required

for the target, the screen (which, if required, may have the targets painted on it to scale in black) comes up for five seconds and then drops. Any shots not on the screen do not count. Similarly a moving target can be operated across the picture by the lantern operator. This is done with a wire or taut line stretched across the screen, targets being worked by means of pulleys and a running line.

The gallery should be as far as possible light-tight, but the use of a hurricane lantern at the firing point does not affect the brightness of the picture. A red bull's-eye lamp pushed out on a raised platform as shown on Fig. III, and at the firing point, answers to the use of a red flag on the ordinary range.

All superimposed targets must be coloured black. The gallery in use in the 69th Punjabis' lines has been excavated for economy, but should a disused barrack or other building be available for the purpose, so much the better. All that is then required is to build a bullet catching stop butt, excavate the lantern shed and exclude outside light.

The following is an estimate of cost, provided regimental labour is used to construct the gallery :—

		Rs	a.	p.
Lantern, lamp and 50 slides	...	180	0	0
Freight of above, customs, etc.	...	15	0	0
Roofing of gallery (would vary with locality)	...	100	0	0
Two canvas screens, 11' x 11' for target	...	6	0	0
Miscellaneous expenses ..	...	30	0	0
		<hr/>		
		331	0	0

In conclusion, it may be noted that with a cinematograph attachment to the lantern, and suitable lighting, it would be feasible to throw various forms of realistic moving targets on to the screen.





# THE ORGANIZATION OF THE EUROPEAN CAVALRY ON THE BENGAL ESTABLISHMENT FROM THE YEAR 1760 TO 1772.

By CAPT. V. HODSON, 10TH D. C. O. LANCERS.

To those acquainted with Broome's *History of the Rise and Progress of the Bengal Army*, it must ever be a matter for regret that, owing to lack of adequate financial support, the author was unable to produce more than the one volume, which brings the narrative down to the year 1767. Published over 60 years ago, it may still be regarded as the standard authority on the period of which it treats; and had the author been able to fulfil his original intention of concluding his history only at the termination of the Second Sikh war, we may take it for granted that military literature would have been enriched by the addition of several volumes as detailed and as carefully compiled as the first.

Stopping short however, as it does, at the end of Clive's second term of administration as Governor and Commander-in-Chief, it fails to satisfy our curiosity as to what eventually became of the little corps of European cavalry whose exploits are set forth in its pages. The history of the native portion of the Bengal Army has been written more than once, prior to the appearance of Broome's work as well as subsequently; but so far as the present writer is aware, no connected account dealing with the rise, progress, and eventual abolition of the European cavalry has yet appeared. Having recently come across two hitherto unpublished letters which tend to throw more light on the period from 1767 to 1772, it is proposed to narrate here as briefly as possible the subsequent history of this corps.

It will be necessary, in order to supply the context, first to go over ground already covered by Broome, without, however, going into details of the campaigns in which the corps was engaged. On the other hand, the various Parliamentary Reports, Minutes of Council, and Despatches from the Court of Directors, relating to their pay and organization, which are either merely referred to, or not mentioned at all by Broome, will be given here *in extenso* when necessary. The sources from which Broome drew his information may still be consulted by the curious: they consist for the most part of Reports of the Committee of Secrecy appointed by the House of Commons, 1773; and of the Select Committee of the House of Commons, 1772; the *Seir Mutagharin*; and Caraccioli's *Life of Robert Lord Clive*; all of which have again been laid under contribution for the purposes of this article.

Before proceeding further it would be as well here to state that the term "*European Cavalry*" is used advisedly, the troops



consisting in great part of men of any European nationality rather than British. The majority of the officers even appear to have been foreigners, or at any rate of foreign extraction; for amongst them we find such names as Chaigneau, Cavalho, Delassere, Hessman, and Eiser. Nor is this perhaps altogether to be wondered at when we consider the number of foreign soldiers of fortune with whom India was infested at this period—French, German, Swiss, Dutch, and Portuguese—all ready to sell their swords to the highest bidder, European or native; and on the downfall or temporary eclipse of one master to take service with the conqueror.\* Thus we find that the artillery in the service of Mir Kasim Ali Khan was almost entirely manned by Europeans; † whilst the Bombay European Regiment had a Swiss company attached to it; three French companies were formed at Madras from the prisoners taken at the capture of Pondicherry, being subsequently sent round to Bengal; and Lally's Body Guard deserted *en masse* to the English during the same siege.

Having said this much by way of introduction, let us now turn our attention to the year 1760, and we shall see how this small corps of cavalry—this mere handful which, during the ensuing decade, was to play its humble but by no means inconsiderable part in the task of welding the British *raj* in India—came to be raised.

The proposals for raising a body of European cavalry for service in Bengal were first put forward by Colonel John Caillaud in September 1760. This officer, then in command of the forces in Bengal, had been greatly hampered by the want of the mounted arm during his recent campaign against the Shahzada, Ali Gohar, son of the Emperor of Delhi, subsequently known to history as the Emperor Shah Alam.

Colonel Caillaud, it may be observed, had only recently been successful in urging upon the Board in Calcutta the necessity for raising two *risalas* of native cavalry, known as the Moghal Horse, and his idea now was to leaven this purely native force with an element of European blood.

His proposals, as will be seen from the following extract from Minutes of Council, were adopted, and the three troops shortly came into being.

*Extract from Minutes of Consultation, dated Fort William, the 22nd September 1760.*

"Colonel C. Caillaud represents to the Board that, it having been found absolutely necessary to raise a body of European Cavalry for the service of the Hon'ble Company in Bengal, it is proposed the following Regulations should take place for the establishment of that Corps.

\* Cf. Compton's *European Military Adventurers of Hindustan*; also Keene's *Hindustan under Free Lances*.

† Broome, p. 863.

"First that there shall be raised two troops of Dragoons to be commanded by the officers whose names are underwritten.

First Troop.

1 Captain Henry Spelman, with pay at 15 shillings per day.			
1 Lieutenant George Hay	do.	9	do. do.
1 Cornet Christopher Thos. Chaigneau.	do.	8	do. do.
1 Quarter-Master	do.	5½	do. do.

Second Troop.

1 Captain-Lieut. John Cavalho, with pay at 9 shillings per day.			
1 Lieutenant William Elerson	do.	9	do. do.
1 Cornet Delasart	do.	8	do. do.
1 Quarter-Master	do.	5½	do. do.

The number of men in each troop to consist of—

3 Sergeants allowed pay at the rate of Rs. 36 each per month.		
3 Corporals	do.	24 do.
14 Privates	do.	18 do.

"The Hon'ble Company to bear the whole first expense of fitting out each troop complete; after which the Captains of the respective troops are to keep all their accoutrements, furniture, etc., belonging to the horses in good order and repair, they are likewise to feed the horses, provide them with shoes and physic, etc., and to defray every other necessary charge; for which they are to be allowed Rs. 30 per month for every horse in the field, and Rs. 20 per month for every horse while they are in garrison. The company are to give the first clothing.

"As soon as the men appointed to serve in the horse are draughted from the battalion, they are immediately to receive their nett pay as Dragoons until the end of the first year. The Captains are not to begin to stop any off reckonings until the first day of January of the year following. The stoppages are Rs. 10 from each Sergeant, Rs. 7 from each Corporal, and Rs. 5 from each private man per month.

"Besides the two troops of Dragoons above mentioned, it is also proposed to establish one troop of Hussars, consisting of one Quarter-Master, a Sergeant, a Corporal and twenty-five private men to be allowed the same pay and to be under the same Regulations as the Dragoons.

"The Board approving of Colonel Caillaud's proposal—AGREED they be carried into execution and that commissions be granted to the gentlemen he recommends to the command of the cavalry."

The command of this troop of so-called Hussars appears to have been given at first to a Captain Thomas Witchcot (or Witchcott), who was shortly succeeded by Captain Eiser, the former officer subsequently commanding the 5th Sepoy Battalion.

Although the men apparently were forthcoming in sufficient numbers, and we shall presently see how they were recruited, the provision of horses for mounting them was a different matter. Why this should have been so is not evident, as the Moghal Horse found

it no difficult task to procure adequate remounts in sufficient quantities. The greatest difficulty, however, was experienced in obtaining horses for the European cavalry, and for some months the application to this corps of the title "Cavalry" was purely euphemistic.

So much so indeed was this the case that we find, in November 1761—when the corps had been in existence for over a year—that four horses only had been procured to mount 66 men. Three months later again, *viz.*, on 8th February 1762, Major Carnac writes to the Court of Directors in England stating that although the men of this "ideal troop of cavalry" had the pay and appointment of troopers, they were not yet mounted, and that "there was not the least probability of their being completely provided with horses under a considerable length of time."

Broome, in his history, goes so far even as to state that "Very great difficulty was experienced in procuring horses for mounting these men, and their numbers, even when complete, which they never were, would have been too weak to be of much service; the consequence was that the efficiency of the infantry was greatly impaired by the formation of a most expensive body of almost nominal and perfectly useless cavalry."

"Expensive" they undoubtedly remained to the end of their days; but the epithet "useless," although perhaps merited at this early period of their existence, was far from being so a few years later. To narrate in detail the subsequent achievements of this corps in the field would, however, be outside the scope of this short sketch; and they are, moreover, adequately set forth in the pages of Broome's History.

As to the men: these at first were selected from amongst the best of the Company's European infantry, which at this period totalled some 1,200 men; and we may take it for granted that the high rate of pay offered in comparison to that drawn in the infantry was sufficient inducement for the best men to offer themselves for enrolment in the newly raised corps. At a later period, casualties in the troops were replaced by drafts of recruits specially enlisted in England for service in the cavalry and sent out yearly by the Court of Directors. It is possible also that, in order to replace exceptional casualties (such as occurred in the action of 13th October 1764, when 12 out of a total of 60 were either killed or severely wounded), recourse may have been had to the numerous unemployed Europeans who were to be found in Calcutta at this period; also possibly to such deserters from Mir Kasim Ali Khan's brigades as did not transfer their services to the Nawab Vizier on the final downfall of the former in October 1764.

It must not be supposed, however, that the Court of Directors of the Hon'ble East India Company, on learning for the first time of the existence of this cavalry corps, could view with equanimity this addition to their military expenditure, heavy as it already was. In February 1762, they wrote to Bengal complaining of this extra

charge which had been thus suddenly thrust upon them, and urging the necessity for keeping the attendant expenses within the strictest possible limits. They further directed that the whole corps, or at least a part thereof, should be reduced as soon as circumstances would safely admit of this step being taken.

Before, however, the above-mentioned despatch had time to reach India, the Board in Calcutta had already taken steps to augment their cavalry

1761.

by the addition of a fourth troop which was intended to act as a Body Guard to the Commander-in-Chief. This troop, which consisted of 34 rank and file under the command of a cornet, was raised out of the regiment which Colonel Coote had brought with him from Madras to Bengal in 1761.

Colonel Coote himself arrived in Calcutta with a portion of his regiment in April 1761, the remainder following at intervals during the rest of the year; and we must here digress for a moment in order to give the following extract from a letter from the Government of Fort St. George to the Council at Fort William, dated 2nd August 1761:—

"On the *Fattee Salam* which will sail in a few days, we purpose sending you a further part of Colonel Coote's regiment.

"Colonel Coote in order to keep his regiment as complete as possible left directions with Major Gordon to enlist out of the prisons here as far as 100 men; upon his making application to do so, Mr. Pigot acquainted him that the removal of Colonel Coote's regiment to Bengal would make the foreigners now in the service bear a greater proportion than he thought prudent, to the number of English that would remain on the coast, and would therefore instead of giving him 100 men out of the prison, send with him to Bengal that number of the foreigners now employed, who are men in whom we may reasonably suppose more confidence can be placed, as they have served some time with Colonel Coote. This will explain to you our reasons for having sent Mr. Martin's free regiment."

Mr. Martin was, of course, the famous Claude Martin of *Constantia* (now known as *La Martinière*), Lucknow. Originally a *sous-officier* in Lally's Body Guard, he deserted with that corps to the British at Pondicherry in 1761; raised a French troop of cavalry, and was sent round to Bengal, eventually obtaining a commission and dying a Major-General in September 1800.

The exact date of the formation of this Body Guard is not known, as no returns for the years 1761 or 1762 are available.

The earliest return which the present writer has been able to trace is dated 14th February 1763, and is

1763.

worth reproducing here, as it shows that the difficulty earlier experienced in procuring horses had been overcome by this date.

A General Return of the Hon. Company's Troops on the Bengal Establishment, February 14th, 1763.  
*Cavalry.*

	OFFICERS.						SER-GEANTS.		DRUMMERS AND TRUMPETERS.		EFFECTIVE RANK AND FILE.				Total Non-Commissioned and Privates.		HORSES.		
	Commissioned.			Staff.			Fit for duty.	Sick.	Fit for duty.	Sick.	Fit for duty.	Sick.	Farriers.	Total.	Total Non-Commissioned and Privates.		Fit for duty.	Unit for duty.	Total.
Body Guard to the Commander-in-Chief.	...	...	1	...	...	...	2	...	3	...	28	...	1	29	34	42	4	46	
Dragoons, 2 Troops	2	4	2	1	2	1	7	...	4	...	85	16	...	101	112	124	13	137	
Hussars	...	1	1	...	...	...	3	...	1	...	29	4	...	33	37	46	4	50	
Total	2	5	4	1	2	1	12	...	8	...	142	20	1	163	183	212	21	233	

In the Public Proceedings, dated Fort William, March 17th, 1763, we find the following resolution :—

" It being judged necessary that the Body Guard which Colonel Coote brought with him from the Coast should be commanded by an English Gentleman—

" AGREED—Mr. George Hay, the 1st-Lieutenant of Captain Spelman's Troop, do take charge thereof, and that we grant him a Commission as Captain-Lieutenant to take rank from the 1st of March."

For the next twelve months the total strength of the 4 troops of cavalry remained at between 160 and 180 rank and file.

1764.

In March 1764, the Council turned its attention to the reorganization of the army, and Major John Carnac was directed to ascertain in which direction economies could best be effected. He accordingly recommended that the two troops of Dragoons should be disbanded, their services not being commensurate with the heavy expense attending their upkeep.

His recommendation was adopted, the reduction of the two troops of Dragoons was ordered, and the Hussars and Body Guard were amalgamated in one troop " for the purposes of patrolling and reconnoitring."

The establishment of this troop was laid down at—

1 Captain,	1 Riding Master,
1 Lieutenant,	4 Sergeants,
1 Adjutant,	4 Corporals,
1 Quarter-Master,	60 Privates,

under the command of Captain Hay.

The disbanded Dragoons were drafted into the infantry, and five officers also, viz., John Mair,\* George Bolton, † William Hessman, John Dangerfield, and George Knott, were, by G. O. of July 7th, 1764, ordered to take rank in the infantry from the dates of their first commissions as cornets.

On October 1st, 1764, the strength of the troop was 6 officers and 67 rank and file.

On the 13th of the same month this weak troop of cavalry, then forming part of Major Munro's force, took part in a cavalry action fought near the Bunas Nullah against the troops of the Nawab Vizier of Oudh. The following account of this action, as narrated by Caraccioli in his *Life of Robert, Lord Clive*, is worth repeating here :—

" Major Champion ordered . . . Mr. Sirdel ‡ who had under his command about 15 or 20 European horse to charge the enemy: the European cavalry led the van over the bridge, and

\* Mair was subsequently given command of the 3rd troop of Moghal Horse.

† Probably a clerical error for George Bolton Eyres. This officer commanded the 2nd troop of Moghal Horse in 1765.

‡ The name is given as Surdal by Broome whilst in the Burial Register of St. John's Church, Calcutta, appears the following entry :—" 1768, December 21st—Mr. John Surdal, Cornet of the Body Guard."

attacked the enemy with great resolution, . . . Mr. Sirdel . . . did wonders with his own hands. After killing 3 of the enemy, he was attacked by a fourth in armour. He made a cut at him, but found it had no effect. The enemy returned it, and it was only by the address of Mr. Sirdel, throwing himself out of his seat on one side of his horse, which saved him. The enemy's sword cut the pomel of his saddle almost through: Mr. Sirdel then discharged one of his pistols, which had the desired effect."

The troop also took part in the battle of Buxar, fought on October 23rd, 1764, on which occasion, owing to casualties in the action described above, its effective strength amounted to 40 only, exclusive of officers.

We now enter upon the third and last phase in the existence of this force of European cavalry; but before doing so, let us glance for a moment at the subsequent careers of such of the officers whose names have been mentioned.

Spelman died in 1765; Hay, broken in health, resigned on February 27th of the same year. Chaigneau resigned the service on November 9th, 1761; Ellerson (or Elerson) on October 12th, 1762; and Delassere (Delassert or Delasart) had been killed in action on July 19th, 1763. Of John Cavalho or Eiser no trace has been found; whilst Surdle, as we have already seen, died in Calcutta in December 1768. Thomas Witchcot resigned February 27th, 1765; and Dangerfield died the same year. In November 1779, William Hessman, who had risen to the rank of major, was killed in a duel by Colonel Ironside. George Knot resigned in 1788; whilst George Bolton Eyres died in 1797, having retired with the rank of major-general only a few months previously.

In August 1765, Clive, who had been sent out again by the Court of Directors with a view to placing their affairs on a better footing, set about the reorganization of the army. One of his first measures of reform was to disband the troop of European cavalry, retaining only a small Body Guard for the Governor, the supernumerary men being transferred to the artillery and infantry.

The strength of this Body Guard was fixed at—

- 1 Lieutenant.
- 2 Sergeants.
- 2 Corporals.
- 2 Trumpeters.
- 20 Privates.

Their pay is given in the subjoined table.

*“Expense of one Troop of European Cavalry, on the Bengal Establishment, for the Governor's Guard:—*

Commanded by a Subaltern.	Pay of each per month. Sont. Rs.	Batta of each per month.	Gratuity per month.	Total per annum in £ st.
	Rs. a. p.	Rs. a. p.		
1 Subaltern ... ..	99 13 7	60 0 0	24	275
2 Sergeants ... ..	29 10 0	10 0 0	...	118
2 Corporals ... ..	23 9 0	10 0 0	...	100
2 Trumpeters ... ..	23 9 0	10 0 0	...	100
20 Privates ... ..	16 7 6	10 0 0	...	715
The commanding officer is allowed for feeding 2 horse- for himself, and for feeding the 26 horses of his troop, at Sont. Rs. 30 per month				
	...	...	...	1,257
<i>Non-effective.</i>				
1 Sergeant-Major ... ..	20 0 0	}	...	164
1 Qr Mr.-Sergeant ... ..	20 0 0			
1 Pay Sergeant ... ..	10 0 0			
1 Rough Rider ... ..	20 0 0			
1 Saddler ... ..	20 0 0			
1 Farrier ... ..	20 0 0			
Total ... ..	...	...	...	2,729

The reduction ordered by Clive appears to have been carried out gradually, as we learn from a return, dated October 1st, 1766, that 50 rank and file, exclusive of the European non-commissioned officers employed with the three *risalas* of Moghal Horse, were still borne on the establishment of the troop.

1766.

By December 1st, 1767, the troop had been reduced to its authorised strength.

In either 1769 or 1770 the command of this troop, now known as “The Governor's Troop of Body Guards,”

17 2-70.

was given to Lieutenant Robert Patton who held the post of commandant until the troop was disbanded in 1772. This officer, it is interesting to note, was the first to hold the appointment of Military Secretary to the Governor-General.



He acted in that capacity to Warren Hastings from the date of the latter's assumption of office as Governor-General in October 1774, until succeeded by either Lieutenant-Colonel Kyd or Major (afterwards Major-General) William Palmer in 1776.\* Born in either 1742 or 1747, the third son of Philip Patton, Collector of Customs at Kircaldy, Fife, and younger brother of Admiral Philip Patton, he obtained an ensigncy in the Bengal Army on July 22nd, 1767, becoming lieutenant on June 18th, 1767, and captain on July 4th, 1771.

In a return, dated December 31st, 1770, he is described as "Lieutenant of European Cavalry and Military Secretary to the Governor;" and on November 30th, 1771, as "Captain, Military Secretary to the Governor, Commanding Officer of the Body Guard."

On resigning his commission on March 2nd, 1776, he was gazetted Colonel and returned to England.

He held office as Governor of St. Helena from March 1802 to July 1807, when he retired owing to ill health and took sail for England, where he died on January 14th, 1812.

In 1771, Patton devised a scheme by which he sought to improve the efficiency of his troop. His letter on the subject, together with the Commander-in-Chief's remarks thereon, are given here in print for the first time.

*Copy of a letter from Captain Robert Patton, Military Secretary to the Governor and Commandant of the Governor's Troop of Body Guards, to Brigadier-General Sir Robert Barker, Bart., Provincial Commander-in-Chief in Bengal.*

"CALCUTTA :

13th July 1771.

"SIR,—I take the liberty of laying before you a proposal for forming a troop of European Cavalry upon a respectable footing which would not I think cost the Company a greater expense than keeping up the present Troop of Body Guards and yet might in many respects be of material service to the Company.

"The present Troop of Body Guards consists only of twenty private troopers, two Corporals, two Trumpeters, and two Sergeants with the Commanding Officer, which are kept up merely as an occasional guard of State for the Governor without a possibility that so small a number could ever render any service as a body of cavalry. But if the European troop were to be increased to betwixt fifty and an hundred privates with a suitable complement of Commissioned and Non-Commissioned Officers which I am of opinion might be done with a very small increase of expense

\* Some doubt exists as to who Patton's successor was. According to a doubtful local tradition current in Calcutta, Kyd succeeded him, but it appears more probable that his place was taken by Major William Palmer.

to the Company and without taking one single recruit from the supplies sent out from Europe, the advantages resulting from such an establishment would be manifest. Such a body properly disciplined, the Commanding Officer would have a satisfaction and a pride in the discharge of his duty. And if there should happen to be actual service in the country (more especially in case of an invasion by an European Power who could have no cavalry in the field) their services might be found most important and most essential; it would then become an object to have the horses properly dressed and the men well instructed, they would answer the same end with respect to the Black Cavalry which the European Infantry answer to the Sepoys. And if at any time an occasional increase of cavalry should be found necessary they would serve as a useful nursery for that purpose. At the same time when they are not employed upon service if stationed at the Presidency they would much better answer the purpose of supplying guards and attendants for the Governor than the present Troop of Body Guards.

"By the present establishment of the Troop of Body Guards when complete every Trooper is allowed two horses which are the property of the Company and Rs. 30 per month is given for keeping and feeding each horse. This amounts to a large sum for supporting a handful of men who are too inconsiderable to answer any useful purpose to the service. But the heaviest expense to the Company on the present footing of European Cavalry is in the sums which must be the more exorbitant as they are unlimited and unascertained and of course liable to fraud and imposition. I would propose to abolish this charge entirely by establishing a contract for supplying the troop with horses and the first article of the contract should be that the Company's present stock of serviceable horses should be purchased by the contractor. Each Trooper should be furnished with an approved and sufficient horse and the contractor be allowed a stated sum monthly for providing and feeding each horse, he standing to the risks of all deaths and accidents except in the case of actual service in the field. This would fix the monthly charge of the troop to a regular and stated expense. Upon this plan the sises and grass-cutters attending upon the horses would be found by the contractor and it would be the duty of the Quarter-Master of the Troop and under him of every particular Trooper to see that each horse was properly attended to and fed regularly. As the reputation of the Commanding Officer would depend upon the condition of his troop and as it would undoubtedly be his pride to have them in the best order he would take care that no horses should be admitted but such as were fit for the service.

"With respect to the monthly allowance to be given the contractor for every horse, in the fixing of this three circumstances would deserve attention. First the capital he must employ in the service of purchase of so many horses upon which a suitable interest would be allowed. Secondly the expense of finding attend-

A General Return of the H. M. Company's Troops on the Bengal Establishment, February 14th, 1763.  
*C. G. G. G.*

OFFICERS	Sergeants	Privates	Drummers and Trumpeters	SICK			EFFECTIVE RANK AND FILE			HORSES		
				Fit for duty	Sick	Partially disabled	Fit for duty	Sick	Partially disabled	Fit for duty	Partially disabled	Total
Regiment of Foot	1	1	1	2	1	3	28	1	1	34	42	46
Regiment of Horse	1	1	1	2	1	4	45	16	1	112	124	137
Regiment of Dragoons	1	1	1	3	1	1	29	4	1	37	46	50
<b>Total</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>7</b>	<b>3</b>	<b>8</b>	<b>142</b>	<b>20</b>	<b>1</b>	<b>163</b>	<b>212</b>	<b>233</b>

In the Public Proceedings, dated Fort William, March 17th, 1763, we find the following resolution :—

“ It being judged necessary that the Body Guard which Colonel Coote brought with him from the Coast should be commanded by an English Gentleman—

“ AGREED—Mr. George Hay, the 1st-Lieutenant of Captain Spelman's Troop, do take charge thereof, and that we grant him a Commission as Captain-Lieutenant to take rank from the 1st of March.”

For the next twelve months the total strength of the 4 troops of cavalry remained at between 160 and 180 rank and file.

In March 1764, the Council turned its attention to the reorganization of the army, and Major John Carnac was directed to ascertain in which direction economies could best be effected. He accordingly recommended that the two troops of Dragoons should be disbanded, their services not being commensurate with the heavy expense attending their upkeep.

His recommendation was adopted, the reduction of the two troops of Dragoons was ordered, and the Hussars and Body Guard were amalgamated in one troop “ for the purposes of patrolling and reconnoitring.”

The establishment of this troop was laid down at—

1 Captain,	1 Riding Master,
1 Lieutenant,	4 Sergeants,
1 Adjutant,	4 Corporals,
1 Quarter-Master,	60 Privates,

under the command of Captain Hay.

The disbanded Dragoons were drafted into the infantry, and five officers also, viz., John Mair,\* George Bolton, † William Hessman, John Dangerfield, and George Knott, were, by G. O. of July 7th, 1764, ordered to take rank in the infantry from the dates of their first commissions as cornets.

On October 1st, 1764, the strength of the troop was 6 officers and 67 rank and file.

On the 13th of the same month this weak troop of cavalry, then forming part of Major Munro's force, took part in a cavalry action fought near the Bunas Nullah against the troops of the Nawab Vizier of Oudh. The following account of this action, as narrated by Caraccioli in his *Life of Robert, Lord Clive*, is worth repeating here :—

“ Major Champion ordered . . . Mr. Sirdel ‡ who had under his command about 15 or 20 European horse to charge the enemy: the European cavalry led the van over the bridge, and

\* Mair was subsequently given command of the 3rd troop of Moghal Horse.  
† Probably a clerical error for George Bolton Eyres. This officer commanded the 2nd troop of Moghal Horse in 1765.

‡ The name is given as Sirdal by Broome whilst in the Burial Register of St. John's Church, Calcutta, appears the following entry :—“ 1768, December 21st—Mr. John Sirdle, Cornet of the Body Guard.”

ants and finding the horses. And lastly the risk from deaths and accidents of losing his horses or having them dismissed the service. A Mogal Trooper is allowed by the Company Rs. 50 p. month for his own pay and for finding and feeding his horse. I should therefore suppose that a sum betwixt Rs. 50 and the Company's present allowance for feeding their own horses would be thought adequate to the purpose proposed by them.

"The Troop of Body Guards wear at present a very expensive Body Guard Regimental which is found them by the Company and considerably adds to the expense of keeping up this corps. I would propose that the pay of the Trooper should be increased but that their subsistence or neat (? net) pay should very little exceed that of a private Centinel in the regiment, the surplus to be deducted as off-reckonings to furnish them with a genteel uniform and equip them as horsemen. There are several other circumstances that might deserve attention if this subject were treated in detail which is not necessary at present.

"One strong argument for the adopting of this plan is that the Europeans for forming such a troop might easily be found without having recourse to the recruits which are annually sent out by the Company, for there are many Europeans about Calcutta who are unemployed and will not enlist in the service as foot soldiers who would gladly be entertained as horsemen. Many also of the soldiers who have already served their time and decline renewing their contract in the Infantry would be induced to list as Troopers. I have experienced the truth of what I have advanced and am certain that in this manner the troops would be amply supplied with recruits so that by the formation of this corps there would be an acquisition to the service of just as many Europeans as the troops might consist of. Not only this but as frequent misbehaviours might be expected amongst individuals a very proper punishment for some crimes would be to remove the delinquents from the troop into one of the regiments, by which means a new channel would be opened for supplying recruits also to the infantry who could not be obtained by any other means. And in case a war should happen in Europe (as we have at present much reason to expect) I need not point out to you the importance of every resource of this kind.

"Thus Sir have I ventured to offer to your consideration the imperfect outlines of a plan which I think might prove of utility to the public. I cannot express the satisfaction I should feel if it met with your approbation. But at any rate I am assured from your candor that a favourable construction will be put upon this address.

"I have the honour to be,

&c.,

(Sd.) ROBT. PATTON."

The above letter was forwarded to the Council in Calcutta together with the following covering letter from Sir Robert Barker :—

HEAD-QUARTERS,  
MONGHYR :

October 26th, 1771.

“ To

THE HON'BLE JOHN CARTIER, ESQ.,  
*President and Council of Fort William.*

“ GENTLEMEN,—It having occurred to me that a body of European cavalry might be of a very considerable use in case of the lower Provinces being invaded by a European Power and indeed might be of advantage to lead on and inspire with confidence a body of black cavalry in case any war in this country should render an augmentation of our present numbers expedient, I beg leave to offer for your consideration an address I have received on this head from Captain Robert Patton, the present Commanding Officer of the Governor's Body Guard. The article of expense is undoubtedly an object to be considered, but I think the plan he has proposed will obviate that apparent increase as it will be found that the augmentation of the present Body Guard to one hundred men may be effected without any very considerable addition of charges appearing on the Company's books, and such a respectable body will be serviceable either acting with or without native cavalry. The intent of their being a Body Guard to the Hon'ble the President of the Settlement will by no means be prevented, indeed on the contrary for their increase must add much to the splendour of his retinue on public occasions nor will the strength of the regiments be affected by this proposal since Captain Patton promises his ability to procure the number of men to complete the corps without having recourse to the regiments or to the recruits of the season. Should this meet with your approbation and you are pleased to set it on foot permit me to recommend to your favour Captain Robert Patton for the command of this corps.

I am, etc.,

(Sd.) ROBERT BARKER.”

Search amongst the records preserved in the Imperial Record Office in Calcutta has failed to bring to light any reply to the above letters, and we can only suppose that the Board had already under consideration the question of the abolition of the corps.

Its doom was eventually pronounced in Minutes of Council of  
May 23rd, 1772, from which the following is  
an extract :—

1772.

“ The Board also deliberating on the little service the small body of cavalry in the Company's pay can ever be of, and that in

time of actual service it would be either exposed to the perpetual hazard of being cut off at any distance from the infantry or prove an embarrassment if joined to it, reflecting also that the expense of a body of horse capable of doing real service would exceed our means since the annual cost of so inconsiderable a number as we now maintain is not less than Rs. 3,01,675-1-2—RESOLVED that the whole cavalry both European and Indostan be directly disbanded and that the European Officers and Sergeants, etc., be incorporated with the Brigades."

With these words of gratitude, in recognition of nearly twelve years' faithful service, as its epitaph, did this corps, the pioneers of cavalry in India, sink into oblivion, "unwept and unsung."

The above order was carried out forthwith, and, until the raising of the present Governor-General's Body Guard some 16 months later, not a mounted man remained in the Bengal Army.

The Board in Calcutta were, after all, merely anticipating by a few weeks instructions from the Court of Directors contained in a letter, dated January 5th, 1772, which must have reached India before the close of the year. This letter conveyed the decision of the Directors to dispense with the services of the whole of the cavalry with the exception of one troop of 100 men of the Moghal Horse. Their determination had been arrived at after consultation with Lord Clive and General Caillaud, both of whom had expressed the opinion that 100 horse for each settlement would be sufficient. To quote their exact words: Lord Clive stated that "very few cavalry in India are necessary; that no more than a number sufficient to prevent surprises are wanted; that they are very expensive; and that 100 horse for each settlement would be sufficient." General Caillaud had endorsed the above and added "that a certain number of them might be necessary when the European cavalry of other Powers happen to be opposed to the forces of the Company, but that, in time of peace, a very small body, sufficient for escorts, patrols, and duties of the like kind, was enough."

From the baptismal and marriage registers of St. John's Church, Calcutta, we learn the names of two of the privates who were serving in the troop shortly before it was disbanded: on December 15th, 1771, Dominique Hopkins was married to "Rosa, a Portuguese;" and on January 31st, 1772, Christopher Titus, natural son of William Swanton, was baptised.

In conclusion it may be noted that this small body of cavalry whose fortunes we have so briefly reviewed was, until the year 1894, confounded in the official Bengal Army List with the present Governor-General's Body Guard; the date of raising of the latter being given as 1762. This, as we have seen, was not the case; the Governor's European Troop of Body Guard being disbanded in 1772, and the present Body Guard not being raised until 1773—not 1774 as now stated in the Quarterly Indian Army List.

## THE PHYSIQUE OF THE INDIAN SOLDIER : AN APPRECIATION.

BY COLONEL R. H. FIRTH, LATE OF THE ROYAL ARMY  
MEDICAL CORPS.

Every officer must admit the importance of having men at his disposal of as high a grade of physical fitness as can be obtained. The principle is so well recognised that the State, in selecting its raw material out of which it means to make soldiers, demands that these recruits must be of trustworthy physique and sound constitution; further, as a part of the military education, the State subjects its selected material to a course of physical training. Recently, a large amount of data relating to the height, weight, and chest measurement of young soldiers of the Indian Army has passed through my hands, and much of my spare time during the last year has been devoted to the analysis of this material. True, it has been an arduous task, but the results are sufficiently interesting to deserve publication. For permission to publish, thanks are due and given to the Adjutant-General in India, through whose office at Army Headquarters the material was made available and placed at my disposal.

The facts relate to 5,676 men of the Indian Army, each one of whom had approximately six months' service. As can be readily understood, there are represented among this number considerable diversities of race and caste, so much so that difficulties were experienced in grouping them. As presenting the greatest information with the least trouble the material has been classified into thirteen groups. This arrangement is to some extent arbitrary, but for obvious reasons it was impracticable when dealing with so much data to adhere to all the sub-divisions into which the men can be sub-divided. The following explains briefly the principle upon which the classification has been made. The term Pathan includes Mahsuds, Waziris, Afridis, Yusufzais, Orakzais and all the various classes usually referred to as Pathans; under Hazaras are included only those from the trans-frontier district near Ghazni; the term Sikh includes Jats, Khattris, Labanas and Muzbis; among Baluchis are included Brahuïs; under the head of Punjabis are Musalmans and Hindus of the Punjab, also Ahirs of the Cis-Sutlej area and Jats who are not Sikhs from the same district; under Hindustanis are included Brahmans of the United Provinces and Oudh, also ordinary Hindus and Jats and Musalmans from the



U. P., Oudh, and Bihar; the Rajputs include all the Rajputs whether from Rajputana, the Punjab, United Provinces or Bihar; the Rajputana Hindus include Gujars, Jats, Bagris, and all Hindus not pure Rajputs, with them are grouped a few Rajputana Musalmans; the Dekhani Musalmans and Mahrattas include those from the Konkan; the Dogras, Garhwalis, and Gurkhas are self explanatory; under Madrassis are Tamils, a variety of non-Tamil Hindus, all the Musalmans, Christians, and Pariahs.

The actual numbers belonging to each of these classes or groups, and as to which precise physical data have been available, are shown in the following statement:—

Sikhs	...	...	...	...	...	1,104
Pathans	...	...	...	...	...	566
Hazaras	...	...	...	...	...	69
Baluchis	...	...	...	...	...	57
Punjabi Musalmans	...	...	746	}		766
„ Hindus	...	...	20			
Hindustani Musalmans	...	...	355	}		815
„ Hindus	...	...	122			
„ Jats	...	...	338			
Rajputs	...	...	...	...	...	369
Rajputana Hindus and Musalmans...	...	...	...	...	...	81
Dekhani Maharattas	...	...	221	}		265
„ Musalmans	...	...	44			
Dogras	...	...	...	...	...	228
Garhwalis	...	...	...	...	...	69
Gurkhas (Magars)	...	...	340	}		1,093
„ (Gurungs)	...	...	376			
„ (Khas and Thakurs)	...	...	44			
„ (Limbus)	...	...	14			
„ (Rais)	...	...	31			
„ (Other kinds)	...	...	288			
Madrassis (Hindus)	...	...	42	}		194
„ (Musalmans)	...	...	20			
„ (Christians)	...	...	39			
„ (Tamils)	...	...	67			
„ (Pariahs)	...	...	26			
Total				..		5,676

Primarily, the data were analysed with a view to determine the body weights which correspond to different ages and heights, in association with varying chest girths. The schedules of measurements, however, represented so many diversities of type that it was soon realised that any formulations made on a basis attempting to show correlation between height and weight, age and weight, or chest girth and weight would be largely arbitrary and involve serious fallacies, when applied to not inconsiderable sub-groups of the large classes. Therefore, as being likely to be misleading if applied as a subsidiary aid for examining and enlisting recruits, it was deemed wiser not to attempt the preparation of tables showing even apparent correlations between weight and age or between weight and height. The data, however, do justify the formulation of a general rule which may be of service to medical and recruiting officers. The rule runs as follows:—"For men of between 18 and 20 years of age taking five feet in height as equivalent to 100 pounds in weight, for every inch above five feet add three pounds." Thus, a young man of 65 inches in height should weigh 115 pounds, and one 68 inches in height should scale at least 124 pounds. This rule, as given, is applicable to all classes. If anything, it is somewhat easy on the Hazara from Ghazni, the Pathan, the Baluchis, the Sikh and the Punjabi Musalman, in whom a ratio of  $3\frac{1}{2}$  or even 4 pounds for each inch of height above 5 feet would work out fairly well. However, the rule, as enunciated, will give a sufficiently accurate, though rough, standard for weight to meet all requirements; it will eliminate the very unfit and not exclude the promising young man who may be a bit spare and run down when he presents himself for enlistment. Beyond this, it is unwise even to generalise.

Having arrived at these conclusions as to the object, the determination of which the collection and examination of the data was undertaken originally, it seemed desirable not to waste the material but rather analyse it on other lines. A suggestive line of enquiry seemed to lie in the application of Pignet's factor of physical fitness to the data available. Pignet is a French military surgeon who has devoted attention to various anthropometric questions presented by the men joining and serving in the Army of the Republic. In the course of his investigations, he evolved an empirical factor which he regards as a reliable index of physical efficiency. It is obtained by the following formula:  $F = H - (C + W)$ . In this,  $F$  represents the factor,  $H$  a man's height in centimetres,  $C$  his chest measurement at maximum expiration, also in centimetres, while  $W$  is his weight in kilogrammes. The larger the excess of  $H$  over  $(C + W)$ , or in other words the larger the factor, the poorer the man's physique. In rare cases  $(C + W)$  may be larger than  $H$  and then  $F$  becomes negative. This occurs only in exceptionally powerful men. As representing ordinary individuals, we find a man 5 feet 1 inch in height, with weight of 145 pounds and minimum chest measurement of 36 inches gives a factor of  $-3$ ; similarly, a man of 5 feet 5 inches, a weight of 139 pounds and minimum chest girth of 37 inches gives

a factor of 6; another man of 5 feet 3 inches, a minimum chest girth of 34 inches and a weight of 122 pounds gives a factor of 18; while a man of 5 feet 9 inches, with chest girth of 32 inches, and weight of 119 pounds gives a factor of 40. It is obvious that the short, stout or sturdy type of man will on this scale give the lowest range of factor, while the tall and lean man will give a correspondingly high factor. We find all types in the material under review.

After determining his formula, Pignet evolved a scale for classifying men according to the size of their factor. This classification is as follows:—

Factors less than 10	...	...	Very strong.
„ 10 to 15 ..	...	...	Strong.
„ 15 to 20 ..	...	...	Good.
„ 20 to 25 ...	...	...	Medium.
„ 25 to 30 ...	...	...	Weak.
„ 30 to 35 ...	...	...	Very weak
„ Over 35 ...	...	...	Useless for the Army.

The formula of Pignet is now in general use among medical officers of European armies, by whom it is regarded as affording a safe guide in judging the physical fitness and effects of training of soldiers. Although all the measurements of the Indian soldiers which are now under review were recorded in inches and pounds, it was thought worth while to convert them to centimetres and kilogrammes, and apply Pignet's formula to the whole of the material. It is curious to see the result. It works out as follows for the whole mass of 5,676 men recorded:—

169 had a factor of less than 10	2.9 per cent.
530 had a factor of between 10—15 ...	9.3 „
924 „ „ 15—20 ...	16.2 „
987 „ „ 20—25 ...	17.3 „
1,455 „ „ 25—30 ...	25.5 „
946 „ „ 30—35 ...	16.4 „
665 „ over 35 ...	11.7 „

Judged, therefore, by Pignet's standard for the French about 50 per cent. of these Indians belong to the weak classes, or 70 per cent. fall into the moderate and weak classes. Of course, the standard is a severe one to apply to these sepoys, as the Aryan races are physically quite different from the Latin, the Teutonic, and the Celtic races; still, the result is interesting. If, however, instead of regarding the data only in bulk, we arrange the material into the selected racial groups, we see not only how they respectively conform to or depart from the high standard of Pignet, but also realise that the test shows these Indian soldiers in a far from unfavourable aspect. The following table gives the respective percentages yielded by each of the thirteen groups:—

		Under 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	Over 35.
Hazaras ...	...	7.10	20.23	35.23	20.16	15.83	1.45	Nil.
Pathans ...	..	8.16	9.84	19.73	23.55	28.34	9.88	Nil.
Sikhs ...	...	2.33	6.66	18.22	11.32	22.08	22.25	17.04
Punjabi Hindus and Musalmans	...	1.43	5.90	23.89	12.59	23.49	17.57	15.13
Baluchis ...	...	...	19.16	21.34	17.39	19.16	15.73	6.92
Rajputs ...	...	1.88	8.68	14.68	16.44	28.17	17.89	11.88
Rajputana Hindus and Musalmans	...	...	3.77	4.86	13.48	39.26	30.85	7.42
Hindustani Hindus and Musalmans	...	0.70	4.92	4.92	18.46	31.77	22.09	17.06
Dekhanis	...	...	2.62	5.64	15.20	44.11	22.52	9.81
Gurkhas	...	5.52	19.44	19.24	21.85	19.94	6.98	6.53
Garhwalis	...	5.54	14.88	31.18	8.67	28.04	4.26	7.13
Dogras ...	...	0.90	7.64	12.77	23.51	15.00	25.11	14.05
Madrassis	...	...	3.18	7.78	22.76	31.34	16.46	18.08

The figures for Garhwalis, Rajputanis, Baluchis, and Hazaras, being based upon relatively small numbers, may be somewhat fallacious, but even as they are they may be accepted as fairly representative of the types. Among the Hindustanis, the lower factors were given by the men classed as Brahmans, some of whom appear to be of fine physique.

The foregoing being the facts, it is of interest to see how these figures for men of the Indian Army compare with corresponding

analyses for similar men of other armies. We are in a position to give the facts relating to 859 recruits joining at Gumbinnen in East Prussia,\* also as to 9,779 recruits in Baden, and as to 8,453 Bavarian recruits.† The following comparative statement will explain itself:—

			Under 10.	10 to 20.	20 to 30.	30 to 35.	+35.
Prussian Recruits	...	...	5.4	39.3	51.9	3.0	0.23
Baden	„	...	4.7	28.0	45.6	13.6	8.10
Bavarian	„	...	7.8	40.5	49.5	1.7	0.29
Indian Soldiers	...	...	2.9	25.5	42.8	16.4	11.7

Regarded in this way, we find that, allowing for the differences of race, the Indian soldier holds his own with the German. In fact if we tabulate the facts, as in the following table, we find that the men of certain races or class groups among the Indians, such as Hazaras, Pathans, Baluchis, Sikhs, Punjabis, Gurkhas, and Garhwalis conforms closely to that for the three groups of Germans.

			Under 10.	10 to 20.	20 to 30.	30 to 35.	+35.
Mean of selected Indian races	...	...	4.52	37.83	38.91	11.16	7.53
Mean of German groups	...	...	5.96	35.93	49.06	6.10	2.87

The selected Indian groups constitute 65 per cent. of the whole material under analysis, and that the figures for the whole mass do not show better is due to the fact that large numbers of Indians are spare men and rarely run to flesh. This makes the weight of an Indian to be relatively low in proportion to his height. It follows from this, his Pignet factor is inclined to be high. Though the Indian soldier does not give a very high percentage of men with very low Pignet factors, that is below 10, still he does not give many with very high factors of over 35. He conforms closely to the "good" and "moderate" groups.

\*Beitrag zur Verwertbarkeit des Pignetschen Verfahren Deutsche Militärärztliche Zeitschrift, November 1911.

† Der Militärarzt, 22nd November 1911.

For Indian statements, a good working scale to adopt for Pignet's factor, if it were ever to be taken up in India, would be to class 10 to 15 as "very strong," 15 to 20 as "strong," 20 to 30 as "good," 30 to 40 "indifferent," and over 40 as "weak" or "undesirable." Those having factors of less than 10 might be either classed as "exceptionally strong" or simply included with the 10—15 group as "very strong." On this latter basis, the 5,676 cases analysed give as percentages 12·2 as very strong, 16·2 as strong, 42·8 as good, 23·9 as moderate or indifferent, and 4·2 as weak or undesirable.

In submitting this analysis, one is conscious that it presents certain defects. But the mass of material has been very difficult to analyse, and such analysis as one has made has been very irksome at times and somewhat laborious. It is hoped that the trouble taken may be of some interest. If it does nothing else, it will or should show that, in the comparative sense, the material from which the Indian Army is recruited is good and in the case of some particular races is very good.

For the convenience of those wishing to apply Pignet's rule, a table of comparative English and French measures of weight and length is given on the next page.

Table for conversion of Pounds and Inches into Kilogrammes and Centimetres.

	Pounds.	Kilogrammes.	Inches.	Centimetres.
	100	45.300	30	76.20
	101	45.753	31	78.74
	102	46.206	32	81.28
	103	46.659	33	83.82
	104	47.112	34	86.36
	105	47.565	35	88.90
	106	48.018	36	91.44
	107	48.471	37	93.98
	108	48.924	38	96.52
	109	49.377	39	99.06
	110	49.830	40	101.60
	111	50.283	...	...
	112	50.736	...	...
	113	51.189	...	...
	114	51.642	...	...
	115	52.095	...	...
	116	52.548	...	...
	117	53.001	...	...
	118	53.454	...	...
	119	53.907	...	...
	120	54.360	...	...
	121	54.813	...	...
	122	55.266	...	...
	123	55.719	...	...
	124	56.172	...	...
	125	56.625	55	139.70
	126	57.078	56	142.24
	127	57.531	57	144.78
	128	57.984	58	147.32
	129	58.437	59	149.86
	130	58.890	60	152.40
	131	59.343	61	154.94
	132	59.796	62	157.48
	133	60.249	63	160.02
	134	60.702	64	162.56
	135	61.155	65	165.10
	136	61.608	66	167.64
	137	62.061	67	170.18
	138	62.514	68	172.72
	139	62.967	69	175.26
	140	63.420	70	177.80
	141	63.873	71	180.34
	142	64.326	72	182.88
	143	64.779	73	185.42
	144	65.232	74	187.96
	145	65.685	75	190.50
	150	67.950		
	155	70.215		
	160	72.480		

## CORRESPONDENCE.

### HOW TO IMPROVE THE MUTUAL RELATIONS BETWEEN BRITISH OFFICERS OF THE INDIAN ARMY AND THEIR MEN.

SIR,—As so much importance is attached—and very rightly—to the question of how to improve the mutual relations between British officers of the Indian Army and their men, and to increase the knowledge of British officers regarding the customs and amenities of life, and views and prejudices of the country people who enlist in their regiments, I would suggest that it should be compulsory for all British officers, as part of their education, before they become captains, to have spent some time in the country or countries from which their regiments enlist their sepoys. By spending a month or six weeks in the country with the people an officer will acquire a far greater knowledge of them than can be acquired by reading handbooks about the classes, and in a comparatively short space of time acquire an insight into the people's lives that would take him years to acquire in the regiment, where owing to duty and the atmosphere of discipline surrounding them the men are disinclined to chat and talk about themselves and their homes and country. In their own homes, they are much more accessible and inclined to be more communicative.

The men like their British officers to visit their country, and it tends to greater sympathy between them and would improve the officer's practical knowledge of the languages.

Again the interest aroused by these visits will tend to make officers take still further interest, and must tend towards a better understanding between British officers and the Indian ranks. If officers were given travelling allowances to and from the country they visited it would be the only expense to Government.

To ensure that officers gained advantage by their visits, I would not let them go until they had served five years with their regiment; and they should be expected to keep a diary of where they had been, what they had heard and seen, and what information they had picked up.

E. W. GRIMSHAW, MAJOR,  
*84th Punjabis.*





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1882...MASON, Lieut. A. H., R.E.  
1883...COLLEN, Maj. E. H. H., S.C.  
1884...BARROW, Capt. E. G., 7th Bengal Infantry.  
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1889...DUFF, Capt. B., 9th Bengal Infantry.  
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Con-  
    tingent.  
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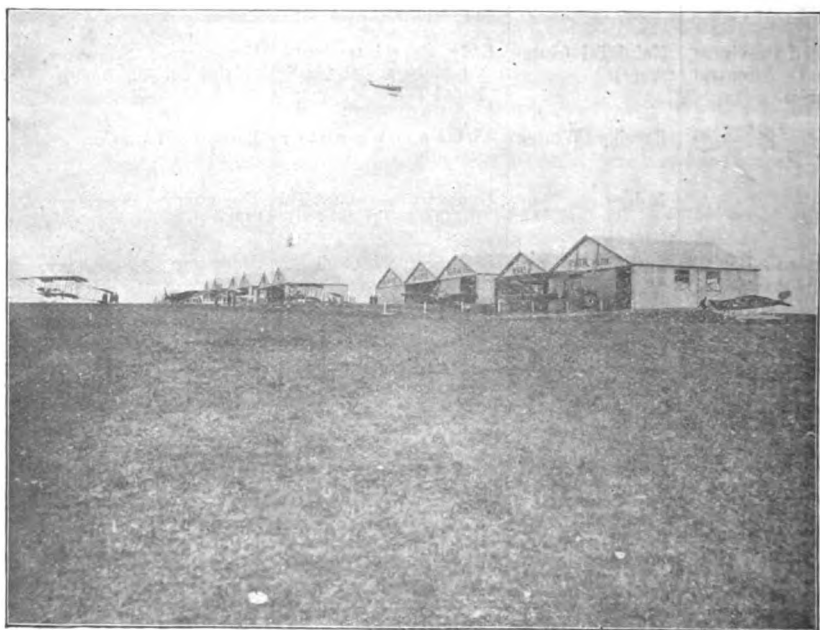


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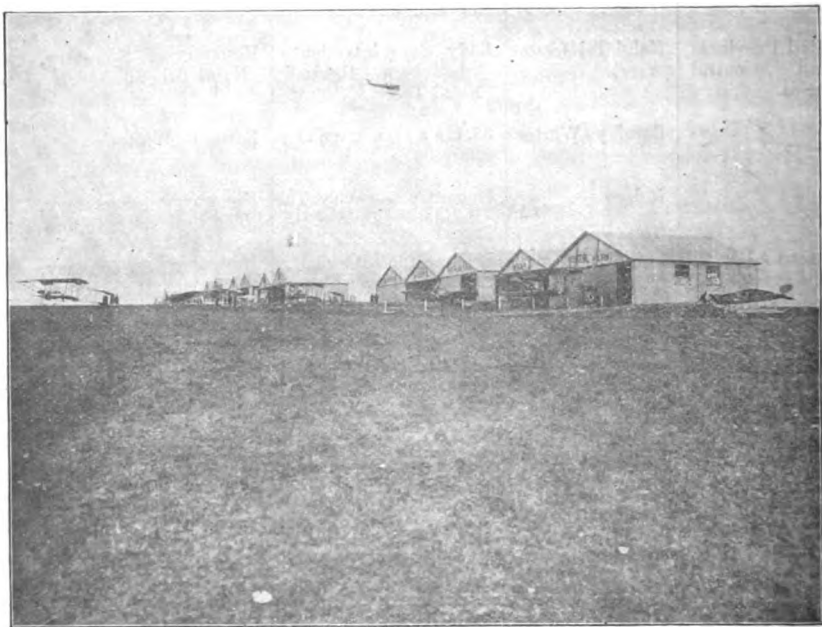
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" R. M. G. Tulloch, Royal West Kent Regiment.	

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" J. S. Fitzgerald, Royal Irish Regiment.
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Vol. XLII.

April 1913

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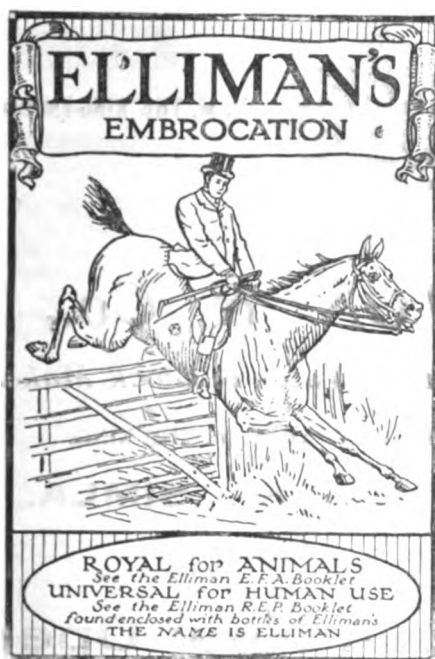
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43 pp., with index, 12mo. 1911, Re. 1.

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**Scouting.** Notes on Scouting. By J. M. BLAIR, The Black Watch. Second edition.  
As. 6.

**Military Law.** British. The Manual of Military Law, 1907, with amendments.  
Rs. 2.

**Military Law.** India. Manual of Indian Military Law, 1911. Re. 1-8.

**War Establishments.** India, 1911. As. 9.

**War Establishments.** Expeditionary Force, 1910-11. War Office. As. 10.

**Physical Training.** Manual for the Indian Army, 1911. As. 6.

**Engineering.** Manual of Field Engineering, 1911. War Office. As. 12.

**Sanitation.** Manual of Sanitation in its application to Military Life, 1907. As. 4.

**Cavalry.** Cavalry Training, 1907, reprinted with amendments. Re. 1.

**Cavalry Training.** Indian Supplement, General Staff, India, 1911. As. 5.

**Signalling.** Training Manual. Signalling, 1907. Reprinted with amendments.  
1911. As. 8.

**Signalling.** Indian Supplement to Signalling Regns., 1912. General Staff, India.  
As. 7.

**Training and Manœuvre Regulations,** 1909. As. 6.

**Training and Manœuvre Regulations.** Amendments, 1910. As. 2.

**Training and Manœuvre Regulations.** Indian Supplement, General Staff, India,  
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**Field Service Regulations.** Part I. Operations, 1909. Re. 1.

**Field Service Regulations.** Part II. Organization and Administration, 1909. Re. 1.

**Musketry Regulations.** Part I, 1909. Reprint 1912. As. 8.

**Musketry Regulations.** Part II, 1910. As. 6.

**Musketry.** Indian Supplement, 1911. As. 5.

**Musketry.** The N.-C. O's Musketry Small Book. A Pocket Reference on Musketry Knowledge, 1911. Re. 1.

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APRIL 1913.

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Lieutenant F. V. B. Witts.  
Captain W. Johnston.  
Lieutenant H. D. Hickley.  
Lieutenant W. Leith-Ross.  
" D. W. Acworth.

Captain A. H. P. Cruickshank.  
" S. van B. Laing.  
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" O. A. Geoghegan.

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Captain W. Pike.  
Lieutenant J. R. C. Dent.  
" B. N. Young.  
Major J. M. Lacey.  
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Lieutenant F. M. Dowley.  
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Captain T. C. Catty.  
" A. H. Arbuthnot.  
Lieutenant F. N. Lane.  
Major G. A. Leslie.  
Lieutenant C. G. L. Tottenham.  
Captain C. N. Macmullen.  
" A. E. Erskine.  
Lieutenant F. C. De Butts.  
" H. P. Currey.  
" R. H. Wilson.  
" A. Patterson.  
2nd-Lieut. A. F. Slater.  
Lieutenant I. Burn-Murdoch.  
" A. T. G. Beckham.

Lieutenant Z. G. Burmester.  
" E. H. S. Chapman.  
" W. H. G. Baker.  
Captain C. Vickery.  
" H. S. Tyndall.  
E. C. Gibson, Esq., I.C.S.  
Captain A. F. Bons.  
" T. B. Minnikin.  
Lieutenant R. D. E. Darell.  
Major D. G. Bryce.  
" T. L. Leeds.  
" R. P. Wemyss Quinn.  
Captain W. N. Atkinson.  
" T. M. Luke.  
" R. H. Chenevix-Trench.  
Lieutenant I. Ferrier.  
Lieut.-Colonel E. W. R. Stephenson.  
Lieutenant R. G. Bacon.  
" A. O'H. Wright.  
Major V. K. Birch.  
M. S. Andrew, Esq.  
Lieutenant E. O. Wheeler.  
" H. G. Tranchell.  
Captain M. C. Lake.  
2nd-Lieut. W. C. McLaren.  
Lieutenant H. P. Dobson.  
Major F. G. H. Sutton  
Captain J. M. Stewart.  
Lieutenant R. H. Mylne.  
" T. H. Battye.  
Captain R. A. Needham.  
" E. E. D. Henderson.



2nd-Lieut. R. E. J. Thomson.  
 Captain T. W. H. Jones.  
 Lieut.-Colonel C. H. James, C.I.E.  
 Lieutenant O. J. Fooks.  
 Major A. D. Musgrave.  
 Lieutenant E. T. Martin.  
 " R. H. Farren.  
 Captain A. C. P. Cochran.  
 Major E. B. Peacock.  
 Captain J. C. More.  
 Major H. A. D. Fraser.  
 Lieutenant H. J. Cummins.

Captain H. J. Mackenzie.  
 " J. N. Crawford.  
 2nd-Lieutenant A. F. K. Penrose.  
 Lieutenant G. R. O'Sullivan.  
 " H. L. Crofton.  
 " H. S. Edden.  
 Captain G. W. Kenny.  
 Lieutenant M. F. Hammond-Smith.  
 2nd-Lieutenant D. A. M. MacManus.  
 Lieutenant M. J. T. Reilly.  
 " R. B. Shubrick.

## II. GOLD MEDAL ESSAY COMPETITION, 1912-1913.

The Council have selected the following as the subject for the Gold Medal Essay for 1912-13:—

"Examine the application of the main principles laid down in Field Service Regulations I, Chapter VII (The Battle), to the conditions of a campaign in a terrain similar to that of Baluchistan and Afghanistan, against an army organized on modern principles."

The following are the conditions of the competition:—

- (1) The competition is open to all gazetted officers of the civil administration, the navy, army, or volunteers.
- (2) Essays must be printed or type-written and submitted in duplicate.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1913.
- (6) Essays will be submitted for adjudication to Referees chosen by the Council. No medal will be awarded if the Council consider that the best essay is not of a sufficient standard of excellence.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in August or September 1913.
- (8) All essays submitted are to become the property of the United Service Institution of India *absolutely*, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays must not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables, or maps.

## III. TACTICAL SCHEMES.

To assist officers studying tactics, tactical schemes are issued by the Council of the Institution, to members only, on the following terms:—

Rupees 5 per scheme, or Rs. 50 for a complete series of ten schemes, which charges include criticisms and solutions by a fully qualified officer selected by the Council.

Two sets of schemes (10 schemes in each series), revised to 1912, are now available, and an entirely new series (Series VI) is in process of preparation, of which eight problems are ready for issue.

A number will be allotted to each member applying for papers, and solutions must be sent under these numbers to the Secretary, United Service Institution of India, Simla.

## IV. MILITARY HISTORY PAPERS.

In order to assist candidates for the Staff Colleges, and other officers, in the study of military history, the Council of the Institution issue, to members only, sets of questions on selected campaigns. The following papers are now available:—

- (a) One set of six questions on the Waterloo Campaign.
- (b) Two sets of six questions each on Callwell's Small Wars.
- (c) Two sets of six questions each on the strategy of the Russo-Japanese War.
- (d) Three sets of six questions each on the battles of the Russo-Japanese War.
- (e) Two sets of six questions on the Afghan War, 1879-80.
- (f) Papers on the Crimean War will shortly be ready for issue.

The charge for these papers is Rs. 5 each, including criticism by fully qualified officers selected by the Council.

A number will be allotted to each member applying for papers, and solutions must be sent under these numbers to the Secretary, United Service Institution of India, Simla.

## V. LIBRARY CATALOGUE.

The library catalogue revised up to 1st November 1912 is now ready. Members requiring a copy should kindly inform the Secretary. List of books since received will be published quarterly with the Journal.

Price of catalogue Re. 1, or Re. 1-4-0 by V.-P.P.

## VI. INTELLIGENCE ESSAY COMPETITION.

With reference to paragraph 12 of these notes, dated October 1912, the Executive Committee have decided not to publish any of the Intelligence Essays for the present.

## VII. THE ACKNOWLEDGMENTS OF THE COUNCIL ARE MADE FOR THE FOLLOWING PRESENTATIONS :—

1. A set of four landscape sketches of the French and German positions at Worth, Weisseberg and Spliheren drawn and presented by Capt. B. R. Moberly, 56th. Rifles (F. F.)
2. History of Outram's Persian Campaign in 1857, 2 Vols. Autograph copies with Lt.-General Sir James Outram's signature, presented by Capt. C. B. Stokes, 3rd Skinner's Horse.
3. The Story of the Japanese War by Lieut.-Col. H. M. E. Brunner, 1909, Vol. II, presented by Major R. E. Tyler, R.A.
4. The Russo-Japanese War on Land by S. H. Anderson, 1911, Vol. II, presented by Major R. E. Tyler, R. A.
5. Aide-Mémoire to Military Science, Vols. I, II and III, presented by Field Marshal Lord Nicholson, G.C.B.

- VIII. N.B.**—(1) Some delay occurred in the issue of the January Journal to Members low down in alphabetical order, which is much regretted. It is hoped that all members eventually received their copies.
- (2) Several instances have occurred lately of members who have asked for books from the library, having refused to accept them on delivery by V.-P. P. Members are therefore informed that when books asked for are out at the time of receipt of the request, they are recalled under Library Rule No. 7 a fortnight after issue and sent to them.

If no instructions are received that they will not be wanted unless received within a certain time, members will be held liable for the postage whether they refuse them on delivery or not.



# THE JOURNAL

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NORTHERN ARMY PRIZE ESSAY, 1912.

BY MAJOR H. R. BLORE, 4TH BATTALION, KING'S ROYAL RIFLES.

*Motto: "Vae Victis."*

**Subject.**—"The destruction of the Armed Forces of the enemy is the only method of attaining the ends of War."—Clausewitz.

The above statement is one of the many dogmas enunciated by General Carl von Clausewitz in his great work "On War." We have it on the authority of his widow that he spent the last twelve years of his life (1818—1830) in studying the wars of Napoleon and in trying to discover for the benefit of his own country wherein lay the secrets of his success.

To Napoleon belongs the credit of having revolutionised the system of warfare which he found in vogue in Europe at the end of the 18th century. The generals who opposed him had mostly been trained in the principles of the so-called "methodical" strategy: they were controlled to a considerable extent by the sovereigns, by the ministers and by the war councils of their respective countries: their armies were composed of costly mercenaries and they were bound to be as sparing as possible of the lives of their troops. On the other hand the Emperor Napoleon, taking as his model the campaigns of Frederick the Great, with recruits who cost nothing and wars waged at the expense of foreign nations, was under no necessity to subordinate his strategy to economic considerations and always aimed at decisive battles. He preferred battles to manœuvres: and he developed with incomparable genius the principle of the offensive.

We may therefore accept Clausewitz's statement as being correct in so far as the wars of Napoleon are concerned: and we propose in

the following pages first of all to consider how far it may be applicable to the campaigns which have taken place since that era, and then to collect any deductions we may be able to make as regards its application to the wars of the future.

Before entering on the main points of our discussion, it will be as well first to clear the ground as regards the meaning of the words "ends of war." The object of all war is to reduce the enemy to such a condition that he will comply with our demands: and these demands may vary in importance from complete submission to some apparently trifling matter which is supposed to touch a nation's honour. War does not therefore always require the complete overthrow of an enemy: and the importance of the object aimed at will determine the amount of resistance that a nation is prepared to offer. There have been in the past innumerable instances in which wars have been brought to a close before either party could be regarded as disarmed, but in such cases the motives affecting the belligerents must have been of the slightest. The conclusion of peace will always be an outward and visible sign that at least one of the belligerents has attained his object.

A further consideration of our subject shows that several points must be established before we can give it our whole-hearted agreement, and a special meaning appears to be attached to the words "only" and "is." The use of the word "only" implies that no other method can possibly be successful: and the verb "is" may be understood to convey the same meaning as the words of our prayer book "As it was in the beginning, is now, and ever shall be."

In order, therefore, to arrive at a logical conclusion, it will be necessary to find satisfactory answers to the following questions. What other methods have been employed by nations in their efforts to attain the ends of war? Have these methods invariably failed in their object? And has the destruction of the enemy's armed forces always obtained the desired result?

In another chapter of his work "On War," Clausewitz says: "Examples from history make everything clear:" and so it is intended to analyse some of the wars which have taken place since the date of his death (1831).

We shall discuss the causes which led up to the outbreak of hostilities, the objects with which war was waged, the methods employed by the two combatants to attain these objects, and the results achieved by such methods.

#### AMERICAN CIVIL WAR, 1861—1865.

In the American Civil War, the Federals declared war with the intention of forcing the seceded states to remain in the Union: and in order to do this, it was necessary to enforce complete submission. The Confederates took up the challenge with the object of retaining their lately declared independence. Hostilities commenced on the 12th April 1861 with the bombardment of Fort Sumter, in South Carolina, and the resistance of the south did not cease until Lee's

army was forced to surrender at Appomattox Court House on the 9th April 1865.

In discussing the methods employed by the belligerents in this long and obstinate encounter, we will first consider the Confederacy. Her object was to pose as a state defending her liberties: "defence, not defiance" was her motto: and her leaders were always trusting to intervention from some European power. Their plans were only made in order to maintain the integrity of their country and to thwart the enemy's advance. The Federals for some three years adopted a policy of partial and disjointed operations: their plans were ingenious but complicated: their chief object was to capture the enemy's capital. They also relied on the results of blockade and hoped to starve their enemy into submission.

It was not until General Grant assumed command on the 9th March 1864, and was given a free hand by the President and the politicians, that the Federals set themselves deliberately to destroy the enemy's forces. General Grant's plan was simple: his object was to fight the enemy wherever he could find him: to press him continually and to give him no rest. In the end this method gained its object and the Confederate forces were gradually and surely destroyed. It is interesting to note that even the capture of their capital did not obtain the desired result: and it was only when the last remaining Confederate army was forced to surrender that the war was brought to a conclusion and peace was obtained.

#### WAR BETWEEN PRUSSIA AND AUSTRIA, 1866.

The principal cause of the war of 1866 was the long standing rivalry that existed between Prussia and Austria: and the determination of the former to take the place of the latter at the head of the German confederation. This rivalry had originated in the time of Frederick the Great and Maria Theresa: it showed again in the partition of Poland, and during the wars of the Revolution and the First Empire: and was also noticeable at the Congress of Vienna in 1815. The main object of Prussia was, therefore, to obtain the humiliation of Austria.

Prussia was ready for war in 1864, but just at this time the quarrel arose with Denmark about Schleswig-Holstein. This matter was dealt with jointly by Austria and Prussia, but after the fighting was over quarrels arose about the administration of the country. The dispute was apparently settled by the convention of Gastein in October 1865, but shortly after Prussia declined to abide by its conditions, and war became inevitable.

The operations were of short duration. Prussia, for various political reasons connected with her alliance with Italy and the attitude of the South German states, was obliged to assume the offensive; whereas Austria, in deference to European opinion and in order to throw the blame for the war entirely on Prussia, remained on the defensive.

War was declared by Prussia on the 16th June 1866: the battle of Koniggratz was fought on the 3rd July: on the 21st July negotiations for an armistice were concluded, the final treaty being signed at Prague on the 22nd August.

By the terms of peace, Austria was excluded from Germany: a Northern German confederation was formed, reaching to the Main: Hanover, the Elbe Duchies and Hesse-Cassel were annexed to Prussia. Also several of the South German states were obliged to accept treaties which, while leaving them nominally independent, brought them in reality within the limits of a common German federation.

Thus Prussia fully attained her object in going to war, having become the acknowledged head of Germany: and this result had been obtained by the destruction of the enemy's armed forces, which had been shattered in fragments in the short space of seven weeks.

#### FRANCO-GERMAN WAR, 1870-1871.

Ever since the days of Napoleon, France had been accustomed to interfere in the affairs of Germany: and in later years was inclined to insist upon this as a right. For instance, we find a French minister of state making use of the following language:—"Prussia has forgotten the France of Jena, and the fact must be recalled to her memory."

Moreover in 1866 the French regarded the success of the Prussian army as a blow directed at herself: and there is no doubt that during the years 1866—1870 they sought to gain some advantage over Prussia as a kind of compensation for Koniggratz. France had for many years put forward a claim to all the country between the Moselle and the Rhine: and she pressed this claim throughout 1866 and 1867, until in 1868 war between her and Prussia appeared inevitable. Matters, however, did not come to a head until 1870, when the question of the Spanish Succession arose: and the presumption of Prussia in putting forward a candidate, in the person of Prince Leopold of Hohenzollern, without consulting France, was regarded as a direct insult by the latter nation.

War was declared by the French Parliament on the night of the 15th July 1870: and Prussia, taking a fair advantage of the imperious conduct of the French nation, seized the golden opportunity and promptly accepted the challenge. War between France and Germany had been inevitable for some years, and the question of the Spanish Succession was merely a suitable pretext with which the French Government sought to obtain the enthusiastic support of the nation. In accepting the challenge, Germany had in view a fixed determination that France should no longer dictate beyond the Rhine: she also wished to secure safeguards against French invasion, and to regain possession of certain fortresses and territories which she had been obliged to relinquish in times of adversity.

The German army soon assumed the offensive: the catastrophe of Sedan (2nd September) was quickly followed by the surrender of Metz (27th October) and the investment of Paris.

The Imperial army of France was destroyed: 122,000 were wounded, taken prisoners and surrendered at Sedan: 179,000 officers and men were taken with the fortress of Metz: and by the close of 1870 the French losses are estimated to have been 350,000 men and 800 guns.

Further resistance seemed useless: but the French Government, animated by the spirit of Gambetta and following the example of the Russians in 1812, refused to abandon the conflict. Fresh armies were organised, and as long as the capital held out, the French nation was prepared to follow its lead: but with the capitulation of Paris, on 28th January 1871, resistance began to give way and the spirit of self-sacrifice to evaporate.

Preliminaries of peace were signed at Versailles on the 26th February, and the final treaty settled at Frankfort on the 10th May. By the terms of this peace, Alsace and German Lorraine, covering 5,600 square miles and containing 1,500,000 inhabitants, were ceded to Germany, and France was condemned to pay an indemnity of 200 millions sterling.

Germany had achieved her object; France was for the moment crushed, and the German Empire became the leading military power of the continent.

#### RUSO-TURKISH WAR, 1877-1878.

Access to the Mediterranean has been for centuries the ultimate aim of Russian diplomacy, and has led, directly or indirectly, to all the more recent conflicts between the Russian and Ottoman Empires. By the treaty of Paris (30th March 1856) the position of Turkey in Europe was re-established: Roumania was set up as a buffer state: and Russia was excluded from access to the Danube and forbidden to put ships of war on the Black Sea. Russia began at the first opportunity to try and evade her obligations, in the maintenance of which England, France and Austria were mainly interested. The two latter countries had, however, suffered so severely at the hands of Germany in 1870 and 1866 that they were not in a position to intervene, while England was scarcely likely to act alone.

In 1875 the Bulgarian atrocities gave Russia a pretext for interfering in Turkey: and after prolonged negotiations she declared war on 24th April 1877, and at once assumed the offensive.

The Turkish forces were at first successful in resisting their enemy's advance, but with the fall of Plevna on the 10th December, the occupation of Sofia on the 4th January, and the defeat at Senova on the 9th January, the road was open to Constantinople.

Adrianople was occupied on the 22nd January, and the Russian Head-quarters moved to San Stefano on the 24th, a small village on the Sea of Marmora, where an armistice was arranged on the 31st.

Peace was signed on the 3rd March 1878, and by its conditions the rule of Russia was established, though indirectly, for that of Turkey over a large extent of territory lying between the Danube and the Aegean Sea. It established the independence of Monte-



negro: gave to Servia a distinct existence: created a Bulgarian principality: and took from Turkey all her Danubian fortresses: Turkey also agreed to pay an indemnity of 1,410 million roubles.

Russia had, therefore, obtained all that could be expected in a single campaign: and if the conditions of San Stefano had been allowed to stand, her next step, the acquisition of Constantinople, would have been an easy matter. That however does not concern our present enquiry: and it remains to discover by what means Russia had attained her success. By the fall of Plevna 30,000 Turks became prisoners of war, and in the battle of Senova 36,000 surrendered: but in spite of these losses there were still large Turkish armies in the theatre of war, and the remains of Suleiman's force had after Senova been transferred to Constantinople by sea. There seems little doubt that it was the presence of the Russian army at San Stefano and Adrianople, in such close proximity to the capital and to the person of the Sultan, which decided the struggle and brought the war to a close.

#### SOUTH AFRICAN WAR, 1899—1902.

The war between the British Empire and the Dutch Republics may be said to have had its origin in the convention of 1884, when the South African Republic, formerly known as the Transvaal, was established under British suzerainty. This word "suzerainty" was really at the bottom of the quarrel, as questions constantly arose as to how far and to what extent the British Government was entitled to interfere in the internal affairs of the Republic.

The chief point in dispute was the refusal of the Boer Government to facilitate the acquisition of burgher-ship by British dwellers in the Transvaal: and combined with this were several minor matters, such as education and taxation, in regard to which British subjects were treated as belonging to an inferior race. But when once hostilities had commenced, there was only one object kept in view by the British Empire, namely, the complete subjugation and annexation of the two Dutch Republics.

On the other hand, the President of the Transvaal, who had secretly been making preparations for war for some years, resisted the demands of the British Government: and thinking the opportunity favourable, declared war with the avowed object of driving the British out of South Africa. The Orange Free State, sympathising with this aspiration, threw in her lot with the sister Republic.

For the accomplishment of such an enterprise, however, external assistance was necessary: and the two Presidents not only relied on the aid of their kinsmen in the South, but hoped ultimately for intervention on the part of some foreign Power. Being without any fleets or shipping, the Republics were unable to attack their enemy's capital, and could only hope to convince the British Empire of the folly of continuing the war by destroying any armed forces that were put in the field against them. Speaking generally, therefore, it may be said that the object of each party to the war was Annexation,

The Republics, although at first successful in the actual fighting, never after the end of February 1900 possessed any chance of attaining their object. Circumstances were against them, as they were unable to prevent the constant stream of reinforcements that came from over the seas.

In 1881 they had obtained a satisfactory peace owing to the change of Government that occurred in England: but in 1900 the British Empire stood firm, having made up its mind to carry the war through to the attainment of its object. After the defeats of the first four months, the British Army was at length in a position to advance, and the enemy was driven back: but this was accomplished by means of skilful manœuvres, rather than by battle. It was hoped that the annexation of the countries, the capture of the capitals, and the conciliation of the inhabitants would bring about a cessation of hostilities; particular stress being laid upon this last point, which may be said to have proved a complete failure. It was not until a systematic scheme for wearing out the enemy, and gradually destroying or capturing his armed forces, had been evolved, that the British Government was able to obtain satisfactory terms of peace, the main point in which was the unconditional surrender of the remaining commandoes in the field.

The total Boer forces that took part in the war are estimated at 75,000: and out of this number 3,700 were killed or wounded; 32,000 were taken prisoners, and 21,256 surrendered before the conclusion of hostilities.

After the capture of the capitals the British army was in actual possession of all that it was fighting for, but this possession had to be upheld by force of arms. The war was only concluded when the armed forces of the enemy had been reduced to such an extent that further resistance became useless.

#### RUSSO-JAPANESE WAR, 1904-1905.

The Japanese were the actual aggressors in this quarrel and sent to St. Petersburg a formal declaration of hostilities. The objects, which they had in view when doing so, were numerous and covered a large portion of the field of Far Eastern politics. They were of opinion that the Russians had encroached on their rights in Korea and the adjoining portion of Manchuria: and they were also animated by the sentimental desire to recover Port Arthur, which had been taken away from them by the action of the Great Powers in connection with the treaty of Shimonoseki, after their war with China in 1895. Combined with this latter aspiration was a feeling that the time had arrived to check Russian naval expansion in the Far East. There was never any question of annexation although no doubt the Japanese meant to obtain some modification of the conditions under which the southern portion of Manchuria had been leased to Russia in March 1898.

The Russians on the other hand did not really desire war, and were unprepared for it. General Kuropatkin, the Commander-in-

Chief, was opposed to it; as during his visits to the East he had become convinced of the formidable nature of the enterprise. His plan of campaign was to remain on the defensive until sufficient forces had been concentrated in the theatre of war: then to assume the offensive, drive the Japanese out of Manchuria and Korea, and possibly in the end to invade Japan. With the exception of two abortive forward movements, at the Yalu and at Telissu, the above plan of campaign was closely adhered to: but it never presented the appearance of being successful, although the Russian military authorities claimed that their army, on the conclusion of hostilities, was ready at last to assume the offensive.

In contrast to the above, the Japanese at once took up the rôle of invaders, closing with their enemy on every possible opportunity; and won a continuous series of victories, though at the expense of heavy casualty lists. It cannot, however, be said that they ever came within reach of destroying the armed forces of the enemy: battles were won, but the enemy retired and was reinforced. They were unfortunately placed in the same position as the Dutch Republics were in the South African campaign: inasmuch as they could not strike at their enemy's capital, and were not in a position to prevent his reinforcements arriving at the seat of war.

By the destruction of the Russian fleet and by the capture of Port Arthur with its garrison, the Japanese certainly attained to the fullest extent two of their main objects: and we may note that these were obtained by the destruction of portions of the enemy's armed forces. Also by the terms of the treaty of Portsmouth the Japanese gained a satisfactory solution of all the remaining points under dispute: and it becomes necessary to enquire what it was which induced Russia to submit to these humiliations and to grant terms of peace, when she still had in the field an army of 600,000 men ready for service: and this at a time when it was becoming increasingly evident that Japanese resources were on the verge of exhaustion.

There were several subsidiary causes, such as the desire for peace on the part of the Russian nation, with whom the war had never been popular: and the feeling that Port Arthur and the fleet were lost, and there was nothing left to fight about, commensurate with the cost involved. But the main factor in the situation undoubtedly was that Russian finances were in an unsound condition and that money was becoming difficult to borrow. Internal troubles at home, combined with an inability to win battles at the seat of war, had irretrievably ruined the credit of the nation.

Having examined the above campaigns we are now in a position to review the conditions which have obtained in the wars of the last fifty years, and to consider to what extent Clausewitz's axiom has held good since the date of his death.

In the first place it becomes evident that, in order to obtain success in war, an army must have some definite object to aim at, which will at the same time obtain the support of the whole nation. The Confederates in 1861, the Austrians in 1866, the Turks in 1877, and the Russians in 1904 had no definite object: they merely wished to ward off the attacks of the enemy, with a view to holding what was already in their possession: and in each of these cases the defensive action failed.

Similarly, success should not be expected by means of intervention on the part of other Powers: the Confederates in 1861 and the Dutch Republics in 1899 both relied on this, but it proved a broken reed.

Other causes of failure, which may be noted, have been conciliation, which was tried by the British in 1900: blockade, as used by the Federals in 1861—1865: and rebellion in the enemy's country as organised by the Boers in Cape Colony from 1900 to 1902.

When we come to consider the successes which have been gained, we see that in every instance the destruction of the enemy's armed forces has played a considerable part. In some cases it has been the determining factor, as in the South African War, in the American Civil War, and in 1866: in other cases it can only be said to have had a preponderating influence, as in 1870, in 1877, and in the Russo-Japanese War.

In several of these cases, however, we see that the influence of the capture of the capital has had no inconsiderable bearing on the decision. In the American Civil War and in the South African War the capture of the capital was of itself insufficient to bring hostilities to an end: whereas in 1870 and 1877 the complete or partial destruction of the armed forces had to be supplemented by the capture of the capital or by a threat against it and the person of the ruler, before the will of the conqueror was imposed upon his opponent.

The latest war introduces a new factor into the situation: some of the objects were obtained by the destruction of a portion of the enemy's forces, but the final submission of one of the combatants was due to a lack of money with which to carry on the struggle.

It appears therefore that in the wars of the last fifty years the destruction of the armed forces of the enemy has gradually lost its position as the only method of attaining success in war. In some instances it has been the determining factor, while in others it has only been one of several contributory causes. We further notice that the capture of the capital has gradually been coming into prominence, and this we attribute to the changing conditions of modern life. The development of easy means of rapid communication, which must be regarded as the chief feature of the latter half of the 19th century, has brought many modifications into the life of a nation: but the chief one is that nowadays all political, commercial and financial activity is concentrated in the capital: and that with the fall of the capital, organised resistance must come to an end.

We now proceed to the last stage of our investigation, which is to consider whether there are any further conditions now existing in the life of a nation which may affect the conduct of war in the future, and produce results different to those which have been observed in the past. In dealing with this subject it is difficult for anyone who has read Mr. W. R. Lawson's latest work "Modern Wars and War Taxes" to abstain from quoting from it to a very large extent. The modern aspect of war is admirably discussed therein, and the writer wishes to acknowledge his indebtedness to it for many of the figures and ideas incorporated in the following pages.

In modern war the Government of a country is brought face to face with three problems, which are essential and indispensable factors in any scheme of military operations. In the first place it is necessary to maintain the armed forces in the field (both personnel and material) in a high state of efficiency: secondly, an adequate supply of cheap food must be available for the population of the country: and, thirdly, the finances of the nation must be so arranged as to maintain its credit and enable it to obtain by means of loans the money required for carrying on the war.

Of these three problems, the first has always had its place in the plans of nations both in peace and war: but we may note that of recent years the importance and cost of armaments has increased by leaps and bounds: and that the system of universal compulsory service, as adopted on the continent of Europe, has completely altered the conditions affecting the destruction of the enemy's armed forces. The Germans now claim to have five millions of trained soldiers available for war, and to destroy such an army in one campaign would be a super-human task.

As regards the second problem, Mr. Lawson says: "One of the most elementary and familiar facts in the history of the world is that in time of war food becomes the most important and indispensable kind of national wealth."

And several factors affecting this question have lately undergone considerable modifications so far as Europe is concerned, where populations have with one exception increased at a steady rate of progression, and the available land now suffers from over-crowding. Consequently a large proportion of the food supplies have to be drawn from outside sources, and in many instances these sources lie in over-sea countries. This naturally tends to place an increased value on such over-sea sources in time of war, and on the control of the great highways by which these sources may be tapped.

All nations of Europe are affected by this question, but Great Britain, being more dependent than others on this source of supply, may be taken as the country affording the most direct evidence on the subject, and it will be interesting to see how she stands in this respect. In 1910 the value of her imports of food, drink and tobacco amounted to close on 258 millions sterling: and the principal items making up this total were.—Bread-stuffs, 77 millions; Butcher

meat, 53 millions; Groceries, 46 millions; and Dairy produce, 43 millions. In addition to the above, Great Britain imported raw materials for her factories and workshops to the value of 261 millions. Here then we see a nation dependent every year on outside sources for the bare necessities of life to the extent of 519 millions: and other nations of Europe are in a similar position, though the amounts involved are not so large.

As long ago as the beginning of the 19th century we see Napoleon taking advantage of this weak point in his wars against Great Britain. In May 1802 and again by the Berlin decree of 21st November 1806, the whole of the ports of Europe, from the mouths of the Weser and the Elbe to the harbours of Brindisi and Otranto, were closed against her: and all commerce between her and the other European states was strictly forbidden. That these measures were effective cannot be doubted: we find Napoleon writing as follows to General Mortier, who was in charge of the blockading operations in Hanover: "You have dealt England a heavy blow . . . . Several firms have already failed."

And if much could be effected in this direction a hundred years ago, the results to be expected at the present day appear unlimited. A nation with complete or even partial command of the sea might by judicious use of its navy cut off all supplies from its opponent: and other states, by virtue of their neutrality, will be unable to make up the deficiency, or will run the risk of receiving similar treatment.

A Government may thus, by the clamour of the population for food, be forced to bring war to an end, although its armed forces in the field may still be in a position to continue the struggle.

It now only remains to consider the bearing of the financial question on the operations of war. From the earliest days it has been recognised that war is a matter of profit and loss: and before commencing hostilities a nation must always consider whether she is likely to gain sufficiently in wealth or prestige to make it worth while incurring the obvious risks and the outlay of money required. And as the centuries have advanced, this question of cost has increased out of all proportion, as will be seen from the following examples.

During the twelve years reign of Queen Anne, which included the wars of Marlborough, the English nation spent 65 millions on war; and the Seven Years' War, which began in 1755, cost only 51 millions, at which price India and Canada were added to the British Empire.

The Napoleonic wars, which covered nearly 20 years, from 1796 to 1815, cost Great Britain approximately 600 millions.

And to come to more recent years, the Franco-Prussian war, lasting only eight months, cost France 544 millions (including the indemnity) and Germany 77 millions.

The South African war cost Great Britain 217 millions during its 2½ years; and in the Russo-Japanese war we find that the Japanese expended 203 millions and the Russian 300 millions in eighteen months.

And this expenditure is more likely to increase in the next European war than to decrease. At a recent meeting at Jena, Herr Bebel, the German Socialist leader, stated that every day of mobilisation would cost from  $2\frac{1}{4}$  to  $2\frac{1}{2}$  millions; and though this may not be quite accurate, it represents fairly well what the cost of the next European war will be for each nation taking part in it; and we may ask ourselves how such colossal sums are to be provided.

There are only two methods by which the expenses of war can be met: one is by increased taxation, and the other by loans. Modern nations are nowadays more heavily taxed than was formerly the case: and they are rapidly approaching the limit of taxation. Little margin remains for the imposition of war taxes: and in England the income-tax is already on what has hitherto been regarded as a war scale.

There remains therefore only one means of paying for war: and that is by borrowing. And if we go a step further and try to discover how this borrowing is to be arranged, we shall find that it will be almost entirely a matter of credit. The big wars of the future will have to be fought mainly with credit, as the supply of gold and silver in the world will go but a very short way towards it. And the belligerent who starts in a sound condition, with a good system of finance, an ample and assured supply of food at moderate prices, and a contented populace, will undoubtedly have a great advantage over his opponent.

Such matters are in the hands of the Government of the country, assisted by the great financiers and large banking syndicates who carry out their operations in the world's money markets. And in time of war, therefore, we can picture to ourselves two Chancellors of the Exchequer, each supported by a group of financiers, each trying to obtain the required loans, and each doing his best to undermine and destroy the credit of his adversary.

It appears to be an open question to what extent a nation can damage her opponent's credit, without at the same time injuring her own. Financial relations are now so much interwoven that all nations are dependent to a very great extent on the banking systems of other nations; and at bottom we find that the whole network of finance is based on the imports of food and raw material.

Therefore it is evident that modern war depends on food and finance as much as on armies in the field; and the support on which these must all lean is the elusive thing we call "credit."

Space does not admit of any further elucidation of this theory; but enough has been said to show that nowadays modern war has resolved itself into a question of money, and that finance will be the governing factor.

In conclusion, then, we lay claim to having established the following facts. From the days of Clausewitz up to the present time the destruction of the enemy's armed forces has been the most certain method of attaining the ends of war; but that during the

latter portion of this period the importance of the capture of the capital and seat of Government has increased.

Secondly, that in the last big war we first come face to face with the fact that a nation was unable to carry on hostilities through its inability to obtain the necessary loans in the world's money markets.

Thirdly, that a new factor has been introduced in the form of an uncertain food supply for the masses of the nation, which is now liable to attack and interruption on the part of the hostile forces.

Fourthly, that the cost of modern war has increased to such an extent that in future all wars will depend on a nation's power of borrowing.

Therefore we say that the "destruction of the armed forces of the enemy" is no longer the *only* method of attaining the ends of war; it may still be regarded as the chief method and the most certain; but under the modern system of "nations in arms" it has become almost impossible to destroy the whole of the enemy's forces, and accordingly other methods now take their place.

It may perhaps be scarcely fair to put Clausewitz into the witness-box to give evidence against himself; but in another portion of his work we read as follows: "In war it is of the first importance never to lose sight of the important factor, against which all effort must be concentrated. This factor is usually the enemy's army, but may be the capital, the person of a leader, the more important of allied states."

If this sentence had been written at the present day, we are of opinion that its author would also have mentioned as secondary factors the "food of the masses" and the "financial credit of the nation."





## THE BATTLE OF TE-LI-SSU.

BY BREVET-LT.-COL. W. D. BIRD, D.S.O.

Though relatively insignificant as regards the numbers engaged, the battle of Te-li-ssu, or Wa-fang-kou as it is called by the Russians, was in reality one of the most important of the Russo-Japanese war. Here for the first time the Russians and Japanese met with approximately equal numbers on an equal field to settle the question of superiority, and important moral issues therefore hung on the result of the battle; for whichever side proved victorious would in future possess the great advantage of a sense of superiority over the enemy.

Towards the end of May 1904 when the general situation of the Russian and Japanese armies was as shown on Sketch 1, Kuropatkin, with the object of relieving pressure on Port Arthur, decided to undertake the offensive against the Japanese army which had recently completed the isolation of Port Arthur by the astonishing capture of the isthmus of Nan-shan.

To this end Lieutenant General Baron Stackelberg, commanding the 1st Siberian corps, was ordered to concentrate at Te-li-ssu, with a view to advancing southwards his own corps and certain additional troops which constituted the "Southern Detachment." This detachment comprised the 1st Siberian corps of the 1st and 9th East Siberian Rifle divisions, each division nominally including four Rifle regiments, each of three battalions, and three or four eight-gun Q.-F. field batteries; a force from the 2nd Siberian corps of a detachment from the 35th division, consisting of the 2nd brigade, that is, two four battalion regiments and two eight-gun Q.-F. field batteries; and lastly, mounted troops, chiefly from the Siberian Cossack division, of nineteen squadrons, two six-gun horse batteries, and one six-gun mountain battery. The total force thus detailed amounted perhaps to some 2,000 sabres, 22,000 bayonets, and 90 guns.

On the 30th May Stackelberg pushed southwards the bulk of his mounted troops, some 1,600 sabres, with six guns, under General Samsonov, to obtain touch with the Japanese who were known to be in strength along the line Pu-lan-tien—Pi-tzu-wo (Sketch 2), thirty miles south of Te-li-ssu.

As a result a skirmish, in which neither side gained much advantage, took place to the south of Te-li-ssu with Akiyama's Japanese cavalry brigade, which had been despatched northwards to reconnoitre, on rumours that the Russians intended to send a force to the relief of Port Arthur.

Both sides were now reinforced by infantry, half a battalion and two mountain batteries being sent to Akiyama, while the 36th

Rifle regiment, three battalions, was railed down to reinforce Samsonov.

On the 3rd June a skirmish again took place, after which the Russians withdrew to Te-li-ssu. The Japanese, finding that they were opposed by a large body of infantry, also fell back to the line of the Ta-sha river, and eventually moved over to a position whence the cavalry could directly cover the area round Pi-tzu-wo, then being used as the base for the troops detailed to cover the investment of Port Arthur.

Meanwhile the Southern Detachment had been moving by rail and road to Te-li-ssu, where Stackelberg arrived on 5th June. Two days later a detachment under General Simonov was sent to Wa-fang-tien, a place about 15 miles south of Te-li-ssu, to cover the concentration of the remainder and keep touch with the enemy, the force detailed for this purpose including Simonov's mounted troops, the 1st and 2nd Rifle regiments of the 1st Rifle division, and a field battery. (Sketch 2.)

On arrival at Te-li-ssu, Stackelberg spent three days in careful reconnaissance of the locality. As a result about three miles south of the village, a position was selected which was to be fortified, and here it was proposed to fight a battle should the Japanese advance before the Southern Detachment was ready to move forward.

Owing to lack of military labour, absence of intrenching tools, and the rocky nature of the soil, the execution of the work was so delayed, that the intrenchments were still in an incomplete state when the battle was fought. In fact, as late as the 14th June, the 36th Rifle regiment was engaged in throwing up trenches on the height lying north of Ta-fang-shin. (Sketch 3.)

At this juncture Stackelberg received a number of memoranda from the Russian General Headquarters calculated to guide his future actions. In these memoranda he was enjoined to advance southwards so as to create a diversion in favour of Port Arthur by drawing against his detachment as large a Japanese force as possible.

He was further informed that in all probability the Japanese had sent two divisions against Port Arthur, and were covering the investment with two more divisions, standing respectively at Pulan-tien and Pi-tzu-wo (Sketch 2). Against these the detachment was to move with rapidity and energy, in the hope of crushing the advanced troops, should they prove to be weak in numbers. On the other hand, Stackelberg was warned that the detachment must not become entangled in decisive action against superior numbers, while his reserves were not to be engaged until the military situation was quite clear.

From these instructions it can only be inferred that Kuropatkin was undertaking a distasteful venture, and that while he was quite prepared to accept the praise for success, he was equally determined that the blame for failure should rest on the shoulders of his subordinate. Kuropatkin's instructions are in fact the very antithesis

of what in our army is required from orders, namely, that the object to be attained should be clearly stated, while the method of attaining the object should be left to the greatest possible extent to the officer chiefly concerned.

Meanwhile the Japanese General Headquarters had learnt, towards the end of May, from secret service agents, that the Russians intended to send a force southwards with the object of attacking the army which had isolated Port Arthur; and when this information seemed to be confirmed by the reconnaissance of Akiyama's cavalry, it was resolved to endeavour to anticipate the Russians by a forward movement on the part of all three armies as soon as they were respectively ready to advance (Sketch 1.) At the same time, with the object of alarming the Russians as to the safety of their line of communication in the Liao-tung peninsula, a naval demonstration was to be made in the neighbourhood of Kai-ping. (Sketch 2.)

General Oku, who was in command of the 2nd army, charged with the duty of covering directly the siege of Port Arthur, now disposed of three divisions—the 3rd, 4th and 5th. Each division was organized into two infantry brigades of two regiments, each of three battalions, with cavalry, artillery, engineers and administrative troops, and comprised about 10,000—11,000 rifles, 500—600 sabres, and 36 semi Q.-F. field, or in some cases mountain guns, the 5th division possessing mountain guns only. In addition the force included Akiyama's cavalry brigade, about 1,000 sabres, and an artillery brigade of 3 regiments, each of 6 batteries, that is, 108 semi Q.-F. field guns. Another division, the 6th, was also on its way to join him from Japan.

Since his trains had not yet completely been landed, nor had his supply and ammunition columns been organized, Oku was, however, unable for the moment to take the offensive, and had consequently disposed his troops along the line Pi-tzu-wo—Pu-lan-tien, where it was proposed to resist the Russians should they advance.

#### RUSSIAN OPERATIONS.

The activity shown at the beginning of June by the Japanese forces operating from the Ya-lu and from Ta-ku-shan, combined with the appearance, on 8th of June, of a Japanese naval squadron off Kai-ping, had caused Kuropatkin to suspend the southward movement of Stackelberg's detachment, one brigade, comprising the 34th and 35th Rifle regiments of the 9th Rifle division of the 1st Siberian corps, being retained at and north of Kai-ping.

On the 10th and 11th June Kuropatkin heard that the forward movements of the 1st and 4th Japanese armies had ceased, and that the Japanese ships had sailed away from Kai-ping. On the 12th he himself moved to Kai-ping, where Stackelberg was summoned for a personal interview, and on 13th it was decided that the Southern Detachment should continue its concentration, advancing southwards on the 18th.

No sooner had this decision been given than a telephone message was received from Te-li-ssu forwarding a report from Simonov of a movement northwards from Pu-lan-tien, of the Japanese in force. Kuropatkin thereupon gave orders for the concentration to be completed by rail, while Stackelberg left for Te-li-ssu.

On arrival at this place, Stackelberg found that the reports as to the movements of the Japanese received from Simonov were to the effect that 20,000 Japanese infantry and 12 squadrons of cavalry were advancing along and to the east of the railway, while six battalions had been noted moving to the west of the line. In the evening Stackelberg consequently caused tentative dispositions to be framed with the object of meeting an attack by two hostile divisions moving from the south; and in the circumstances there can be but little doubt that he was justified in deciding to accept battle.

The hamlet of Te-li-ssu, which gives its name to the battle, lies in a flat sandy little valley running roughly north and south and watered by the Fu-chou river. (Sketch 3 and landscape 3A.)

About a mile wide at the railway station of Te-li-ssu the valley narrows to half a mile north of this place, but broadens again to two miles near the Russian position which lay about three miles south of Te-li-ssu. The Fu-chou river flows in a shallow stream, usually fordable, except after heavy rain, over a wide and stony bed, the valley being quite flat throughout and, as a rule, well tilled. In several localities there are copses of poplar and silver birch. Villages are numerous, but small, and often nestle close under the hills, probably to avoid floods from the river.

North of Te-li-ssu stands a high rocky ridge running nearly due east and west, and broken only where the Fu-chou river has forced for itself a narrow way, but this ridge is too steep to form a good position.

On the east, from Te-li-ssu southwards, the course of the river is controlled by a long rocky ridge projecting spurs and foothills to either flank, one near the village of Lung-wang-miao being specially prominent. On the other bank of the stream there stand a series of low rolling lateral ridges and isolated knolls.

Even the lower hills are rather steep of side, and near the tops of the higher mountains there is often rock outcrop rising sheer for many feet; and the whole hill area is in about equal proportions cultivated, grass grown, or covered with plantations of scrub oak and other trees.

Some four miles south of Te-li-ssu the Fu-chou river bends sharply westwards, and here is joined from the south by a stream of similar character known as the Hou-tou. At the junction of the two streams stands a massive pile of rock called the Lung-chia-tun ridge, extending in a narrow ridge for two and a half miles southwards. East of Lung-chia-tun is a similar mass of mountain known as Chang-tien-shan, and to the east of this again there lie a series of

considerable hills, but west of Lung-chia-tun the ground is hardly more than undulating for some distance, whilst southwards, towards Wa-fang-tien, is a wide basin filled with small hills.

About four miles south-east of Te-li-ssu there rises a small stream which flowing northwards in a restricted valley eventually joins the Fu-chou river near Te-li-ssu. Another more open valley runs north-west from Ta-fang-shin towards Lun-kou. The railway line with permanent-way for the most part embanked, follows first the Hou-tou, then the Fu-chou valley.

According to the arrangements proposed by Stackelberg the position was to be divided into three sections.

The right section comprised a portion of the hilly ground lying west of the Fu-chou, and here, in an advanced position on the height north of Ta-fang-shin, was to be placed one battalion of the 36th Rifles, on ground whence, owing to the steepness of the forward slopes the field of fire was extensive rather than good, though in many places the groups of trenches flanked one another. About one and a half miles to the north was the main position, extending along a salient from a point due west of Li-chia-tou, where there was a redoubt to the village of San-hsi-er.

This line was to be held by  $1\frac{1}{2}$  battalions of the 33rd Rifles and one field battery, while  $1\frac{1}{2}$  battalions of the 36th Rifles were in local reserve. These troops possessed a field of fire for about 1,200 yards across a long reentrant, the ground further south being open and undulating. To the west about a mile away was a ridge slightly higher than the position, which was also commanded by the Ta-fang-shin knoll at a range of about 3,000 yards. The total garrison of the right section would amount to about 3,000 bayonets and eight guns.

The centre section included the Fu-chou valley, and here were to be three batteries protected by gun-pits, while groups of trenches had been thrown up for the escort, 500 bayonets of the 33rd Rifles. These guns could flank, at about 3,000 yards range, the position on the Ta-fang-shin height.

The left section comprised first the Lung-wang-miao spur on which were to be three batteries intrenched, and so placed that the guns could fire down the Hou-tou valley. So narrow, however, was the hill summit, that fire in any other direction was practically impossible, and the steepness of the northern slope was such that withdrawal would be very difficult. On and round the forward slope of the spur the 4th Rifles of 1st Siberian Rifle division were to occupy a series of trenches well concealed in plantations of oak, and possessing a good distant view, though the east field of fire was only moderately satisfactory. To the south-east of the 4th the 3rd Rifles with four mountain guns were to hold intrenchments on the salient west of Ssu-chia-chou, so placed as both to flank Lung-wang-miao and to command the Ssu-chia-chou valley, though their position was itself commanded from Chang-tien-shan. The remaining regiments of the 1st Rifle division

and one field battery now with Simonov, were to become local reserves standing north-west of Wa-fang-wo-pu. Thus there were in the left section to be some 8,500 bayonets and 36 guns.

The bulk of the cavalry, 1,300 sabres and six guns, when they fell back were to move to the Lung-kou area, where they were to guard the right wing and watch the roads and valleys leading towards Fu-chou.

The general reserve consisting of the 2nd brigade of the 35th division and two field batteries, about 5,500 bayonets and 16 guns, was to be near Te-li-ssu, centrally placed, and ready to be used wherever the course of events should dictate.

Thus excluding the cavalry, a frontage of about four—five miles was to be occupied by a force of some 17,500 bayonets with 84 guns, while a reinforcement of two regiments, or perhaps 4,500 bayonets was expected shortly to reach the field. In addition the Tobolsk regiment, 2,500 bayonets and about 200 Cossacks and six guns came up during the battle.

A general usually stands on the defensive to gain time for the arrival of reinforcements or for the completion of operations elsewhere; or does so because he is conscious of some inferiority to his opponent and hopes to redress the balance by using ground and intrenchments to enable economy of force to be practised, for it is obvious that fewer men are required to hold intrenchments than to attack them. That is to say, the defensive is often adopted in order to allow a larger force to be used for the offensive. Now to permit the defender to carry out his intention of attacking the position must be so placed, that if avoided the enemy can be involved in battle in disadvantageous circumstances. This implies that the position shall be on or near the enemy's probable line of advance and shall not be inaccessible, but that movement from and against it must relatively be free, otherwise the attacker will be able to confine the defender in his position and then manœuvre at will.

Again, to enable a successful attack to be delivered, the ground on one flank at any rate must be favourable for manœuvre, and if possible, concealed movement, while the other flank should so far be secured either by the presence of natural features, or by field works, that the troops in the position will form a suitable pivot on which the remainder can lean. A position can, however, only form a satisfactory pivot on which other operations are to hinge if the ground, and the manner in which it is occupied, is such that if attacked the defender may expect to delay and contain the movements of such proportion of the attacking force as will afford the defender a reasonable prospect of striking a successful blow with his reserves. These must be of sufficient strength to render the success of the stroke probable, while space in which they can manœuvre is required.

Stackelberg's object in standing to fight at Te-li-ssu has been clearly defined by himself, *viz.*, that should the enemy advance

before the Russian preparations were complete, they should be drawn against the Te-li-ssu position.

So far as the actual locality is concerned, not much fault can be found with the position at Te-li-ssu, and though it possessed some obvious and grave disadvantages, these must be considered relatively to the advantages.

The area where Stackelberg proposed to fight was so placed, that it could not well be avoided by the Japanese, for, to quote from the Field Service Regulations, the nature of the theatre of war had so narrowed the possible lines of operation, that the enemy's movements could be foretold within definite limits; in other words, the Japanese must move along or near the railway. The position covered the Russian line of communication which could not easily be reached, unless the enemy made a wide sweep with the whole or part of his force round the ridge lying north of Te-li-ssu, while in doing so he would expose himself to defeat in detail. On the other hand, this ridge was passable only at a few points, so that the Russians were fighting with their backs to a defile. Facilities for manœuvre within the position were perhaps not first rate, and the fact that it was split up by the valley of the Fu-chou was a serious disadvantage. This not only prevented concealed movement from one flank to the other, but a large force would be required to secure the Ta-fang-shin and Lung-wang-miao heights, which mutually flanked one another, so that if one was lost the other must almost inevitably fall. Should this happen, the Fu-chou valley would become untenable, when the centre of the line would irrevocably be broken. The field of fire was not so satisfactory as could have been desired and the position could be overlooked by the enemy, while once in the possession of the Japanese the masses of Lung-chia-tun and Chang-tien-shan would screen their movements. No special facilities existed for counter-attack. On the right flank the ground was open and undulating, and though fairly well adapted for development of artillery fire and co-operation by the three arms, did not lend itself to concealed movement; on the left, though covered lines of advance were available, the ground was so broken that movement must be slow and co-operation difficult. If the heights to the south of the Fu-chou valley were in the enemy's possession attack down the Fu-chou valley would be precarious. On the other hand, from the summit of the rocky ridge the Russians could in some degree observe the Japanese lines of advance and therefore their dispositions. Moreover, the Lung-chia-tun ridge would separate and make mutual support difficult between the fractions of the Japanese army should it move astride the ridge; or would oblige the enemy to march along one flank of the obstacle, thus securing the Russians from attempt at complete envelopment, but at the same time safeguarding the Japanese flank. Any enveloping movement made by day against the Russian right would be under the observation of the defenders, and owing to the nature of the ground operations against the Russian left must be slow and difficult.



Had Stackelberg placed his troops along the general line from Lung-kou through Lung-wang-miao these dispositions, though in other respects suitable, would certainly have been open to the criticism that this line was too extensive for the force under his command. Under the arrangement actually adopted the Ta-fang-shin knoll, as has been shown, was practically neglected and consequently even before the battle was joined the Russians were at a serious disadvantage, for should this hill be lost, Stackelberg would be forced to abandon any offensive operations which had been undertaken and to subordinate his movements to those of the enemy. In other words, the battle would be practically lost.

That so able a commander as Stackelberg should have overlooked this obvious fact is inconceivable, and it can only be conjectured that he intended to occupy the hill in greater strength, and supposed that the intrenchments to the north of Ta-fang-shin were in a more advanced condition than actually was the case.

The position on which the battle was fought was probably suitable enough to cover the detrainment of troops at Te-li-ssu, and seems in fact primarily to have been designed for this purpose. It cannot, however, be considered as well adapted to form a pivot of manœuvre in a defensive battle.

Whether the reserves are considered to have been sufficiently numerous to enable the Russian commander to intervene with effect in the course of the battle depends on whether the expected reinforcements are or are not included in their total. Without the 34th and 35th Rifles the reserve numbered only 5,500 bayonets or about one-third of the total available; with the reinforcements the reserve would, however, have been raised to 10,000, which is nearly half the force at the disposal of Stackelberg, and this is the proportion required under Field Service Regulations. On the other hand, a frontage of four—five miles was perhaps unduly extensive for the residue of the force, even allowing that the ground in certain portions of the position, *e.g.* the Fu-chou valley, need not have been strongly held. The position taken up by the Russians must therefore on all counts be condemned as unsuitable for their purpose.

Early on the 14th, in fact before he had received a copy of Stackelberg's proposed dispositions, Simonov was attacked by the Japanese, who were especially active in the vicinity of the railway.

At 8-30 A.M. a report was received from Simonov that he was falling back from Wa-fang-tien, and that the enemy were advancing in two columns, of which the one on the right was leading. During the morning news also came to hand from a Russian squadron, which had been in observation at Fu-chou, that it had been driven back by three hostile squadrons, assumed to be a flanking detachment.

As soon as firing became audible from the direction of Wa-fang-tien, Stackelberg issued orders, perhaps somewhat prematurely, for the troops to occupy the position. Consequently the men stood to arms during the forenoon of a very hot day, while Simonov's detach-

ment retired slowly before the Japanese, the cavalry concentrating between 1 P.M. and 2 P.M. at Ta-fang-shin. The 1st and 2nd Rifle regiments and one field battery reached Wa-fang-wo-pu about the same hour.

At 1-30 P.M. an artillery duel commenced, two Japanese batteries opening fire from positions in the valley near Lung-chia-tun. These were quickly silenced by the Russian guns on Lung-wang-miao, but the Japanese brought up more guns which engaged the Russians from covered positions, neither side having gained much advantage, when at 8 P.M. the contest was abandoned.

Meanwhile at about 2 P.M. the 1st Rifles found that the Japanese, to the strength of three battalions, were endeavouring to turn the Russian left, and were moving over the heights to the south of Wa-fang-wo-pu. This information came to hand so late that the Rifles had only just time to deploy when they were attacked, and after a sharp fight obliged, at 4 P.M., to fall back a short distance. The 2nd Rifles were now moved up to the support of the 1st, and at about 6 P.M. the Japanese were forced back to the high ground to the south of Wa-fang-wo-pu.

On the Russian right two hostile battalions appeared at 4 P.M., near Wang-chia-tun, and two batteries came into position in this locality. Later unsuccessful attempts were made to get guns into position on the Lung-chia-tun mountain, while the hill was occupied by infantry. Against these the Russian guns in the Fu-chou valley fired a few rounds.

At about 6 P.M. the Russian and Japanese cavalries skirmished for a short time on the hills to the west of Lung-kou.

When news was received of the attack on the 1st Rifles, two battalions of the general reserve were moved to Tsui-chi-tun to meet a possible turning movement by the enemy, but the remainder of the reserve was held at Te-li-ssu pending further developments.

Having given these instructions, General Stackelberg rode forward from Te-li-ssu to judge for himself in regard to the significance of the attacks of the Japanese against the left of the 1st Rifle division and from what he saw, as well as from information previously furnished by General Headquarters, by the cavalry, and by other troops, he seems to have come to the conclusion that he was opposed by a force of two divisions, and that the Japanese had thrown forward their right flank in such a manner as to offer an opportunity for a counter-attack.

In these circumstances it is for consideration what action should have been taken by the Russian commander.

In his original instructions Stackelberg had been enjoined to create a diversion in favour of Port Arthur, and had apparently succeeded in his purpose. He had, however, also been directed to act with rapidity and energy in the hope of crushing the enemy's advanced troops, though his reserves were not to be engaged until the situation was clear, and he was not to become entangled with superior numbers.

So far as Stackelberg could judge he was not opposed by superior numbers, while between 3 P.M. and 4 P.M., when he was present on the positions occupied by the 1st Rifle division, there were probably opposite to his concentrated force only the advanced echelons of the Japanese army, which had placed itself astride the Lung-chia-tun ridge. The moment seemed, therefore, propitious for an offensive. On the other hand, Stackelberg was expecting reinforcements to the amount of about 4,500 men, whose arrival would serve to strengthen the force of his blow against the enemy, though delay in striking would mean that the Russians would probably be faced by a concentrated and intrenched force, not by one strung out in depth.

There were thus three courses open to Stackelberg: he could fall back and could do so on the reasonable ground that his mission had been completed while he had especially been enjoined not to run risks; or an immediate offensive could be undertaken, a course more in accord with the spirit of his orders, and one which, moreover, held out fair prospects of success, though but little time would be available to exploit it; in the event of failure the Russians could, moreover, hope to draw off during the night without suffering serious disaster; or, lastly, the attack could be postponed, which would be advantageous in that more troops would be available, but possessed the serious drawback that the enemy would be better prepared to meet an offensive, and might even by attacking anticipate and upset the Russian plans.

To judge the right time for changing from the defensive to the offensive, say, the Field Service Regulations, which a commander usually effects by delivering a decisive counter-attack, is as difficult as it is important, and there can be no doubt that in this difficulty the chief objection to the defensive lies. In the circumstances it is thought that the second would have been the best alternative for the Russians, since it is never wise to let slip opportunities. Stackelberg, however, adopted the last, and resolved to deliver an attack at daybreak, with part of the 1st Rifle division and the general reserve, against the enemy's right or as it was supposed enveloping wing, which was thought to have been offered to the Russians. Other advantages of an offensive in this direction were that though facilities for artillery support were not great, on the whole, the ground was more favourable for attack than was the case on the Russian right, and east of the railway the Japanese would find even more difficulty in using their guns than would the Russians. In addition success against the Japanese right would tend to sever them from their immediate bases on the southern coast of the Liao-tung peninsula.

Orders were consequently sent, at about 4 P.M., for the concentration of the general reserve at Tsui-chi-tun.

At about 6 P.M., Stackelberg, who had returned to Te-li-ssu, issued to his subordinates a series of messages regarding the proposed attack. General Gerngross commanding the 1st Rifle division, was

informed that a brigade of the 35th division would attack the enemy at daybreak in the direction of Wa-fang-wo-pu, and was ordered to undertake a simultaneous offensive with three regiments of his division; the 4th Rifles and two batteries on Lung-wang-miao were to pass under the orders of General Mrozovski, the artillery commander, who in addition was to control the operations of the troops in the Fu-chou valley, consisting now of two batteries and 500 rifles, one battery having been placed in reserve at Te-li-ssu. Gerngross was also enjoined to make arrangements with General Glasko, the commander of the 2nd brigade of 35th division, calculated to insure that the two attacks should be simultaneous. At the same time Glasko was notified that his detachment would be reinforced by a battalion of the 34th Rifles, which had now reached Te-li-ssu, and two batteries from 1st Siberian division, one being from Lung-wang-miao; that he was to arrange with General Gerngross for an attack—no time was specified—against the flank of the Japanese troops at Wa-fang-wo-pu; and that his line of retreat would be *via* Cha-tao-fang. Simonov was also informed that an attack would be made on Wa-fang-wo-pu at daybreak on 15th, and was directed to co-operate by making a reconnaissance at once against the left flank and rear of the enemy, moving towards Yang-chia-tun so as to attract the attention of the Japanese in this direction.

These instructions cannot be considered at all suitable to the circumstances. In the first place the commander was content to shift on to the shoulders of his subordinates the arrangements on which the whole success of the battle depended, and no care was taken to insure that the attacks intended to be simultaneous should be so in reality. Secondly, it was proposed to undertake, in slipshod fashion and without central co-ordination and control which alone can insure success in night operations, an advance by night over a rugged and intricate area.

Attacks undertaken under these auspices rarely succeed and never deserve success, and if Stackelberg was disinclined to direct the operation, all the troops destined to make the counter-attack should definitely have been handed over to Gerngross, who was senior to Glasko.

No sooner had these instructions been issued than a message was received from Kuropatkin suggesting to Stackelberg that an attack should be made against the Japanese left, the map appearing to indicate that the ground in this area was favourable for an offensive. Later in the evening, on hearing it was Stackelberg's intention to attack the enemy's right, the Commander-in-Chief directed the Tobolsk regiment of four battalions, or some 2,500 bayonets, to be railed to Te-li-ssu with the object of insuring the success of the venture, though its timely arrival was to say the least doubtful.

During the evening of 14th the two remaining battalions of 34th Rifles reached Te-li-ssu and were retained there, while it was known that the 35th would come to hand during the night.

It is laid down in Field Service Regulations, Part I, that the force allotted to the decisive attack must be as strong as possible, because success at the vital point will mean success at all points, and the question therefore arises whether even a larger force should not have been detailed for the decisive attack now that the 34th and 35th Rifles were at hand, and Kuropatkin had despatched further reinforcements.

A law is only good so long as it is not carried to excess and obviously to detail an unduly large force for the decisive attack will usually defeat its own purpose, especially when, as in this case, the Russian right was at least as open to a successful stroke on the part of the Japanese as was the Japanese right to a blow by the Russians. Since, however, a bold thrust in the right direction is usually the best defence, for the enemy is then obliged directly to meet it, Stackelberg might well have increased the force of the blow by devoting to this purpose the whole of the infantry of the 1st Rifle division, as well as the 2nd brigade of the 35th division, sending one or two battalions from his general reserve to take the place of the 4th Rifles on Lung-wang-miao. The force delivering the decisive attack would then have included about 14,000 bayonets.

The Russian generals can hardly have been said to have accorded to their commander that whole-hearted co-operation which is essential to success in war, for on receiving his instructions Samsonov, who seems to have taken the place of Simonov, now sick, pleaded that his detachment was too much scattered to enable the commander's orders to be carried out, but added that a strong reconnoitring party would be sent in the prescribed direction. Nothing, however, seems to have been done except that some patrols were despatched during the night through Ta-fang-shin to rouse the enemy's outposts.

On receipt, at 7 P.M., of the order from Stackelberg, Gerngross replied that it was doubtful whether the 1st and 2nd Rifles were in fit condition to undertake a night attack, the men being fatigued while the ammunition required replenishment. To this remonstrance Stackelberg rejoined that the attack must take place. At this juncture an orderly officer from Glasko arrived at the headquarters of the 1st Rifle division bringing a suggestion that the attack should be made before dawn. Gerngross, however, sent a reply to the effect that it would be better if Glasko advanced into line with the 1st Rifle division. It was added that if the corps commander wished to make an attack at daybreak it would be possible to do so successfully. At the same time the substance of this communication was notified to Stackelberg's headquarters.

The proposals of Gerngross do not appear to have been acceptable to Glasko, for twice during the night he sent to Stackelberg's headquarters to ask for orders, but without receiving any response. No further communication was made to Gerngross.

Early on the morning of 15th a dense fog enveloped the battle-field, but when, at 5-30 A.M., the fog lifted, the Japanese opened a heavy fire with a large number of guns from the Hou-tou valley and the direction of Wang-chia-tun against the two batteries now on Lung-wang-miao.

At dawn, on 15th, Gerngross had concentrated 8½ battalions and four mountain guns on the heights west of Wa-fang-wo-pu, and here he waited impatiently for news of Glasko's advance, it being apparently supposed that this general would during the night have moved his troops into line with those of the 1st Rifles division.

Nothing, however, could be heard of Glasko, and since the cannonade in the centre kept continually increasing in intensity, Gerngross decided, between 6-30 A.M. and 7 A.M., to attack the hills south-west of Wa-fang-wo-pu where movements of hostile columns had been observed, and a mountain battery and two machine guns had appeared. It was apparently believed that there were some 3,000 Japanese at Kou-ying and large forces south and south-west of Wa-fang-wo-pu. (Sketch 4.)

Before advancing two messages were sent to Glasko desiring him to attack and assuring him of support. At the same time a report was forwarded to Stackelberg to the effect that Gerngross was awaiting the advance of the detachment under Glasko, that the enemy appeared to be in strength, and that if the attack failed retreat would be costly. The reference to retreat was probably inspired by an instruction which had been circulated early on 15th by Stackelberg in which he remarked that if the Japanese attacked in superior numbers the Russians were to fall back slowly. Such orders are not calculated to infuse the courage required to undertake and bring to a successful conclusion a decisive attack.

Meanwhile Glasko had at daybreak assembled a council of war consisting of his regimental and battalion commanders, at which opinions were divided as to the desirability of attacking. At about 7 A.M., however, Glasko decided to advance in two columns, one moving against a Japanese force located at Wa-fang-wo-pu and estimated at three battalions and a mountain battery, the other towards Cheng-chia-tun so as to turn the enemy's right. No sooner had this decision been taken than the two messages from Gerngross came to hand.

Glasko's attack was, however, not pressed with energy, for when the leading troops of the right column had advanced a short distance they reported themselves checked by superior numbers, while an outflanking movement against the left column also caused it to pause.

It was now between 7 A.M. and 8 A.M., and at this juncture Glasko received the communication from Stackelberg to the effect that if the Japanese attacked in superior numbers the southern detachment would fall back slowly. In these circumstances Glasko was to maintain as long as possible the line Tsui-chia-tun and

Kou-chia-tun in order to cover the retreat of the remainder through the defile north of Te-li-ssu. Should the enemy retire Glasko was to await orders.

The effect of this instruction, which seems to have been inspired by Kuropatkin's original orders that Stackelberg was not to become entangled in decisive action against superior numbers, was most unfortunate, for Glasko, believing himself to be opposed by superior numbers, decided to abandon his offensive and to content himself with demonstrations calculated to assist the 1st Rifle division, which it was presumably supposed, would also break off the fight. No better illustration could be given of the danger of issuing orders and instructions with the object of guiding the actions of subordinates in hypothetical circumstances which have not yet occurred.

Thus at 8 A.M. when the 1st Rifle division had begun to close with the enemy, Glasko's attack had been abandoned, and his troops had even begun to retreat.

On the Russian right Samsonov had, at 3 A.M., issued orders that a Cossack regiment and a Horse battery were to move across the Fu-chou river at Ta-fan-shin. For some reason these troops did not advance until 5 A.M. when they were received and checked by heavy rifle and artillery fire from a force estimated at two regiments holding hills south of the village. This fact was reported to Stackelberg.

At 8 A.M. the Japanese began to press the Russian cavalry, and soon afterwards Samsonov was driven back, first to Lung-kou and then to the ridge 1,500 yards north of this village. From this place he reported that he was confronted by a large force of Japanese.

The retreat of the cavalry uncovered the right of the battalion of the 36th Rifles posted on the height north of Ta-fang-shin which sent back word that this flank was being enveloped by two or three regiments of infantry supported by the fire of mountain guns.

General Kondratovitch commanding the 9th Siberian Rifle division, who had arrived on the evening of 14th, was now placed in command of the troops holding the right and centre sections of the position. On being informed as to the situation he at once pushed from his local reserve at first half a battalion of 36th Rifles, then the remaining battalion to the assistance of the battalion holding the height above Ta-fang-shin.

Very early on 15th, even before the battle commenced, Stackelberg had circulated to all his commanders the instructions regarding a possible retreat, thus, as has been pointed out, unsettling at a critical moment the minds of his subordinates. At about 8 A.M. Stackelberg was in possession of information that at least two regiments were attacking his right, he was also aware that Gerngross had not delivered his attack at daybreak, and had received a report that Glasko had not moved forward.

The situation was therefore such as to cause anxiety, and Stackelberg, mindful of the tenor of Kuropatkin's orders, might well have been excused had he decided to fall back before his troops were

irrevocably committed. The situation was, however, by no means clear; there was still, so far as he was aware, a good chance of beating the enemy, and Stackelberg therefore boldly determined to persevere in his original intention. A staff officer was therefore sent to Glasko with an order that an immediate attack was to be delivered and Samsonov was directed to reconnoitre round the enemy's left as far as Wa-fang-tien, with the object of ascertaining whether the Japanese had received any reinforcement in addition to the four brigades credited to them on 14th.

Between 9-30 A.M. and 10-30 A.M. serious news reached Stackelberg from both the cavalry and Kondratovitch, the enemy being reported to be gaining ground rapidly, while a body of fresh troops, amounting to two regiments with 32 guns, was advancing over the hills to the west of Lung-kou and in such direction as to menace the Russian right. At least 40 guns had been counted south of Ta-fang-shin, and the enemy's fire against Lung-wang-miao and the position in the Fu-chou valley kept increasing in intensity.

To check the Japanese the 35th Rifles and the battery which had been withdrawn on the evening of 14th from the centre section were now sent from the general reserve towards Lung-kou, and the two battalions of the 34th Rifles placed at the disposal of General Kondratovitch, Stackelberg being, for the moment, left without any troops under his immediate orders.

A disastrous movement now took place for Samsonov, who with the object of securing the Russian right had attempted to gain Hui-chui-tun, and found this village in possession of the enemy. Turning back he passed with part of his force through a narrow and rugged defile in the range lying to the north of Te-li-ssu, and only halted on reaching the railway line  $1\frac{1}{2}$  miles to the north of this village. Some squadrons and a Horse battery, however, retired on Te-li-ssu.

The Japanese were consequently able to envelop the right of those portions of the 36th which had been despatched towards Lung-kou, and at 11 A.M. the Russians were being forced back by hostile troops estimated at from three to six battalions. By this hour the battalion of the 36th had been driven from the Ta-fang-shin height at first slowly, then in disorder, finally taking refuge in the valley of the Fu-chou. The 33rd Rifles in position along the San-hsi-er salient, however, continued to hold their own, and for the moment checked the advance of the Japanese.

At 11-30 A.M. the general situation was as follows:—The cavalry had been driven off the field, the Russian batteries on Lung-wang-miao had practically been silenced by the enfilade fire of an overwhelming number of hostile guns in action south of Ta-fang-shin. The batteries in the Fu-chou valley were still in action, but had suffered severely. The advanced infantry of the Russian right wing had been enveloped and driven back by a largely superior hostile force supported by a number of guns, the last local reserves had been expended in the endeavour to stem the tide of the enemy's advance,



but reinforcements, the 35th and 34th Rifles, were on their way to assist the right.

Meanwhile difficulties of ground and the intensity of the hostile fire had prevented Gerngross from making much headway, and at 10 A.M. Glasko, the bulk of whose force had been withdrawn to Tsui-chia-tun, had only just issued orders for the resumption of the offensive in accordance with the representations of the staff officer sent to him by Stackelberg. Even then delays occurred, and as a result the attack was not commenced until 11-30 A.M.

At this hour the main body of the 1st Siberian Rifle division had advanced to within decisive range of the Japanese position, but lacking artillery support and the impulse which should have been given by fresh troops, the attack had come to a standstill, when a report was received from Glasko that his detachment had commenced to move forward, and was making good progress.

While these events were taking place, Stackelberg had ridden to a knoll just west of Te-li-ssu whence he could watch the action of his right flank, and here he received a personal report from Kondratovitch, who apparently had not awaited the arrival of the 35th and 34th, that matters were going badly and that his efforts to check the advance of the Japanese had been fruitless. At the same time there came news from Samsonov that Japanese infantry had reached the railway near Lung-tang-ho and were intercepting the Russian line of retreat.

Since he had now in hand only two battalions of the Tobolsk regiment which had just detrained at Te-li-ssu, and fearing that his retreat would be endangered were he to continue the battle, Stackelberg decided to give way without awaiting news from his left, thus again proving the truth of the maxim that when two commanders mutually attack one another's flanks the commander whose communications are most in danger will subordinate his movements to those of the other.

Orders were consequently issued at about noon for a general retirement, one of the two battalions of the Tobolsk regiment being sent northwards from Te-li-ssu to clear the line of communication.

At this hour the two batteries on Lung-wang-miao had definitely been silenced and soon afterwards a verbal order was received that they were to retire. This they endeavoured to do, but owing to the severity of the enemy's fire and the steepness of the northward slope of the ridge only three guns could be brought away. At the same time the 4th Rifles, who were suffering severely from frontal and enfilade fire, and whose moral had been shaken by the retirement of the troops on their right and of the batteries on Lung-wang-miao, began to fall back in disorder, thus uncovering the right of the remainder of the division. As a result the companies on the right of the 3rd Rifles began to be taken in flank and a little later the troops on the left of the 1st Rifles on the other flank were also enfiladed and fell back a short distance. This movement soon spread to the centre, when Gerngross, who had

observed that the 9th Rifle division had for some time steadily been losing ground, gave the order to retire, reporting his decision at 1-40 P.M. to Stackelberg, who was informed that the withdrawal would be covered by the troops under Glasko. (Sketch 5.)

At this very moment Glasko's advance had at last begun to produce an appreciable effect, the right having reached an isolated hill about three-quarters of a mile north of Wa-fang-wo-pu where the troops came under heavy fire from the high ground to the east of this village. The left had at the same time made good progress in the direction of Cheng-chia-tun.

At 2 P.M. just when the troops of the right column had advanced to within 800 yards of the Japanese, and those of the left column were closely engaged with a hostile force at Cheng-chia-tun, while some cavalry were endeavouring to envelop the Russian left, an order was received from Gerngross directing Glasko to fall back to Tsui-chia-tun, where he was to cover the retirement of the 1st Rifle division.

While the 1st Rifle division was losing ground the 35th Rifles, with two battalions of the 34th and portions of the 33rd, had taken up a convex line extending from the railway bridge south of Te-li-ssu to a point about  $1\frac{1}{2}$  miles west of the village, and here, with the assistance of five batteries, they were able to maintain themselves until 1 P.M., while the other troops of the 9th Rifle division drew off northwards through the defile. At this hour, however, the Japanese began to press them severely, and being enveloped on both flanks they were forced back in some disorder.

At 3 P.M. a body of troops composed of men of the 33rd, 34th, 35th, and 4th Rifles, assisted by three batteries, was still clinging to a height about three-quarters of a mile north-west of Te-li-ssu, and some men of the 36th were holding the railway station, while the remainder of the right wing were streaming northwards.

The Japanese, who were not closely supported by their artillery, displayed but little energy at this juncture, the intense heat of the day possibly in part accounting for the slackness of the pursuit. Still the Russians were in a serious position, when shortly after 3 P.M. a heavy thunderstorm burst over the battlefield, under cover of which they made good their retreat (Sketch 6). Later a rear-guard was formed of portions of the 33rd and 34th Rifles, which, with two batteries took up a position east of Lung-tang-ho. The Japanese, however, did not attempt to do more than skirmish with these troops, and between 6 P.M. and 7 P.M. firing ceased.

The 1st Rifle division had meanwhile lost heavily from rifle and artillery fire during their withdrawal over the steep salients of the rocky ridge, especially at about 3 P.M. when the Japanese established four batteries on Lung-wang-miao. The thunderstorm now intervened in favour of the Russians who were able between 4 P.M. and 5 P.M. to assemble unmolested north of Tsui-chia-tun, whence the retirement was continued *via* Cha-tao-fang under cover of the troops of Glasko's detachment. These troops had fallen back without

being seriously pressed, and when the thunderstorm commenced the pursuit of the Japanese had ceased altogether.

While the Russians were suffering defeat in the Te-li-ssu valley Samsonov had been engaged in dismounted fire action against the force which he had reported was astride the Russian line of retreat, but had not succeeded in producing much impression on the Japanese. At about 1 P.M. the two remaining battalions of the Tobolsk regiment came up by train from the north, and at once disembarking moved to the assistance of the cavalry, taking up a position west of the railway and north of Lung-tang-ho. Samsonov now drew off to the north, ostensibly to parry any further attempts on the part of the Japanese to reach the railway line from this direction.

At first the two battalions of the Tobolsk regiment do not seem to have been able to do more than hold their own against the Japanese, but finally the arrival, at about 2-30 P.M., of the battalion of this regiment which had been despatched by Stackelberg to clear the line of retreat, gave the Russians the upper hand, and the Japanese were forced to retire.

#### JAPANESE OPERATIONS.

Pending the completion of arrangements for the advance northwards, General Oku spared no pains to obtain accurate information regarding the strength and movements of the Russians, and by 9th June the data collected by his intelligence section pointed to the presence at Te-li-ssu, and to the south of it, of at least two divisions and three or four regiments of cavalry.

On 11th the divisional cavalry of the three divisions, supported by infantry, were pushed forward against the Russian advanced troops known to be watching a line some thirty miles in extent to the south of Wa-fang-tien, and estimated at two infantry regiments and a considerable force of cavalry and artillery. No important information was gained by the action of the cavalry, but country folk reported 30,000 Russians with 34 guns at Te-li-ssu (Sketch 7).

The supply and ammunition columns of the 3rd, 4th and 5th divisions came to hand the next day, and though the 6th, the remaining division of the army, had not yet begun to land, Oku decided that the advance could no longer be delayed, lest the Russians should concentrate against the other armies.

The 2nd army consequently began to move northwards on 13th, the infantry marching in three columns, the 3rd division east of the railway, the 5th division and the artillery brigade along the railway line, and the 4th to the west of it. Akiyama's cavalry were placed on the right flank so as to guard the approaches to Pi-tzu-wo.

The troops halted for the night some six miles south of Wa-fang-tien, having encountered only a few Russian reconnoitring detachments.

The orders issued for operations on the 14th were that the 3rd division, to which were attached two regiments, that is, twelve batteries of the artillery brigade, and the 5th division, each less one infantry regiment, were to advance to the line Ssu-chia-chou and

Lui-chia-kou. The 4th division, with one artillery regiment from the artillery brigade, was to march to the vicinity of Fu-chou. The general reserve, two infantry regiments, was to move behind the centre, and the cavalry, reinforced by one battalion and a mountain battery, were to remain on the right flank.

According to these dispositions General Oku when about to close with an opponent whose maximum strength, as reported, was equal to his own, proposed deliberately to disseminate his troops detaching one division westwards which would be separated by some 18 miles of rugged country from the remainder. The Japanese leader was therefore incurring serious risk of defeat in detail, and since the wisdom of every operation of war must be weighed not so much in regard to its theoretical soundness as in regard to the circumstances in which it was undertaken, the question arises whether Oku was justified in making these dispositions?

In Field Service Regulations it is laid down that, "broadly speaking, success in battle may be sought by means of converging movement so timed as to strike the enemy's front and flanks, or flanks, simultaneously, few, if any reserves being retained in hand by the commander-in-chief; or a part of the force may be employed in preparatory action while the commander keeps a large reserve in his own hands with which eventually to force a decision. The character of the opposing commander, the relative numbers, fighting value, and manœuvring power of the opposing forces, as well as the ground and the strategical situation, are all factors which must be weighed in determining the general form in which the battle is to be fought."

So far as is known Oku could at this time claim no superiority in character and ability over Stackelberg, nor, apparently, were the Japanese superior in numbers. The ground westwards was certainly suitable for the development of the fire of the large number of guns at the disposal of the Japanese, and for combined action by infantry and artillery, but these circumstances would hardly justify such separation as was contemplated; while the probability of surprise was not increased by sending a force to the neighbourhood of a large town, like Fu-chou, situated on a main road which was almost certain to be watched by the Russians.

The strategical situation, moreover, required that Oku should extend his right, so as to cover his base Pi-tzu-wo, rather than his left, and since the Russians might at any moment receive large reinforcements, rapid and concentrated action by the Japanese was indicated. On the other hand, Oku's men had recently stormed the apparently impregnable position of Nan-shan, and this fact might reasonably cause him to infer that the two divisions advancing northwards could easily hold their own, if attacked, until the 4th division intervened in decisive fashion by enveloping the enemy's right. In addition, the Japanese might in all probability claim superiority in manœuvring power over the Russians.

In these circumstances, and since no great advantage can usually be won without corresponding risk, Oku's action, though

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Nothing, however, could be heard of Glasko, and since the cannonade in the centre kept continually increasing in intensity, Gerngross decided, between 6-30 A.M. and 7 A.M., to attack the hills south-west of Wa-fang-wo-pu where movements of hostile columns had been observed, and a mountain battery and two machine guns had appeared. It was apparently believed that there were some 3,000 Japanese at Kou-ying and large forces south and south-west of Wa-fang-wo-pu. (Sketch 4.)

Before advancing two messages were sent to Glasko desiring him to attack and assuring him of support. At the same time a report was forwarded to Stackelberg to the effect that Gerngross was awaiting the advance of the detachment under Glasko. that the enemy appeared to be in strength, and that if the attack failed retreat would be costly. The reference to retreat was probably inspired by an instruction which had been circulated early on 15th by Stackelberg in which he remarked that if the Japanese attacked in superior numbers the Russians were to fall back slowly. Such orders are not calculated to infuse the courage required to undertake and bring to a successful conclusion a decisive attack.

Meanwhile Glasko had at daybreak assembled a council of war consisting of his regimental and battalion commanders, at which opinions were divided as to the desirability of attacking. At about 7 A.M., however, Glasko decided to advance in two columns, one moving against a Japanese force located at Wa-fang-wo-pu and estimated at three battalions and a mountain battery, the other towards Cheng-chia-tun so as to turn the enemy's right. No sooner had this decision been taken than the two messages from Gerngross came to hand.

Glasko's attack was, however, not pressed with energy, for when the leading troops of the right column had advanced a short distance they reported themselves checked by superior numbers, while an outflanking movement against the left column also caused it to pause.

It was now between 7 A.M. and 8 A.M., and at this juncture Glasko received the communication from Stackelberg to the effect that if the Japanese attacked in superior numbers the southern detachment would fall back slowly. In these circumstances Glasko was to maintain as long as possible the line Tsui-chia-tun and

hazardous, cannot be condemned if his object in sending the 4th division to the neighbourhood of Fu-chou was to move it to a position from which a decisive blow could be struck. On this head there is some doubt, and the despatch of the 4th division towards Fu-chou seems, in part at any rate, to have been prompted by fear lest a Russian force should move down the Mandarin road and outflank the left of the Japanese. If, then, Oku's aim in detaching the 4th division was to protect his left, his action is open to serious objection. To make a large detachment to meet a similar detachment by the enemy was to follow suit in error; for if the Russians had disseminated their troops the Japanese need only attack with concentrated forces one of the portions of the enemy's army to be reasonably sure of victory.

Early on 14th General Oku was informed that the 6th division had begun to disembark near Pi-tzu-wo, and orders were immediately despatched directing such units as could do so to hurry northwards so as to take part in the expected battle.

During the morning the 3rd and 5th divisions gained ground steadily, driving the Russian advanced parties before them. At about 1-30 P.M. the leading troops of the 3rd division occupied Chang-tien-shan, while two batteries opened fire from the Hou-tou valley on the Russian artillery which was visible on Lung-wang-miao. The Russian Q.-F. guns at first had the best of the artillery contest, but soon the Japanese brought up six more batteries, which, coming into action from covered positions in or near the Hou-tou valley, equalised matters. It was found that the area east of the Hou-tou was too rugged to be traversed by the field guns with the 3rd division. (Sketch 8)

Meanwhile the infantry of the 3rd division had secured the high ground to the south of Wa-fang-wo-pu, driving before it the infantry of the Russian advanced guard, and the 5th division had occupied the Lung-chia-tun mountain, whence the Russian position could be overlooked, and also Wang-chia-tun and Wu-chia-tun.

Shortly before 2 P.M. the 34th Japanese regiment, on the right of the 3rd division, observing movements of troops to the north of Wa-fang-wo-pu which appeared to indicate that the Russians were again falling back, at once delivered an attack and at first met with some success. Between 4 P.M. and 5 P.M. the Russians, however, were reinforced, and the 34th, which had not been supported, was obliged to fall back to the south of Wa-fang-wo-pu.

West of the railway the 5th division merely secured its position on the hills enclosing the valley of the Fu-chou to the south, the artillery firing a few shells against the enemy's centre, which induced the Russians to reply, disclosing the position of their batteries.

Meanwhile the 4th division had halted on arrival on the left bank of the Fu-chou, the only hostile troops encountered being a squadron which was driven out of Fu-chou city. Akiyama's detachment remained at Sha-pao-tzu about ten miles from the battlefield.

The operations of the Japanese on 14th consisted of a series of advanced guard actions undertaken to obtain "detailed information as to the enemy's dispositions," and "to secure tactical points which might assist the attack of the main body," and behind which the deployment could take place.

The Japanese were successful in attaining both objects, for the Russians had on the afternoon of 14th not only disclosed the positions of their batteries, but had shown that the bulk of their infantry was south of Te-li-ssu and east of the railway.

From these and other sources of information, General Oku concluded that he was opposed by about two divisions, but that reinforcements were continually being received from the north. The situation in the area north of Fu-chou was as yet, however, by no means clear, and the Japanese, perhaps thinking that an offensive could hardly have been contemplated by the Russians with a force as small as two divisions, seem still to have been in doubt as to whether a body of the enemy might not be marching southwards along the Mandarin road.

Oku could now, to quote Field Service Regulations, "review the strategical situation and decide whether to manœuvre to gain time, avoiding an engagement; whether to attack the enemy; or whether to await attack."

The rugged nature of the country and the absence of communications did not lend itself to manœuvre, while, though time might bring reinforcements to the Japanese, the Russians would also be strengthened, and perhaps in large ratio. Any delay on the part of Oku might in addition be unfavourable to the other Japanese armies against which the enemy might be massing troops. Delay then was disadvantageous.

To stand on the defensive would be equally so, and for much the same reasons, and in addition the moral of the Japanese would suffer were they to await attack after having advanced to meet the enemy. Moreover, it is doubtful whether, at this juncture, the supply service of the Japanese would have been able to maintain the army had it remained stationary and at a distance from practicable harbours on the sea coast.

The only alternative, then, was to attack, and to attack quickly and in the greatest possible strength before the enemy could be reinforced.

Oku decided to attack, but only with part of the force, whereas it is a maxim that at the decisive point one can never be too strong.

At 11 P.M. orders were issued that at daybreak on the 15th, the 5th division was to advance on Ta-fung-shin, but having secured this place was apparently to await the arrival of troops from the 4th division. The 3rd division was to conform to the movements of the 5th division which could be observed from the Lung-chia-tun mountain. The 4th division had previously been directed to remain stationary and protect the left flank, threatening the enemy's right if oppor-



tunity occurred, but was now ordered to detach at least one brigade to co-operate in the attack on Te-li-ssu. The remainder of the division was seemingly to move northwards to reconnoitre, and at the same time secure the left of the army, and could therefore probably take no active part in the battle. The safety of the Japanese force would, however, have been attained with far more certainty had a few cavalry been left to watch the Mandarin road, while every available man was concentrated to insure the defeat of the Russians at Te-li-ssu. This accomplished, any detachment made by the enemy against the flanks of the Japanese could easily have been dealt with.

The bulk of the Japanese artillery was apparently to operate from the Hou-tou valley and the vicinity of Wang-chia-tun, though one mountain battery—a somewhat small allowance—seems to have been lent by the 5th to the 3rd division, and sent to the area south of Wa-fang-wo-pu.

Akiyama's detachment appears to have been directed to secure the right by occupying Cheng-chia-tun at noon, and might therefore quite possibly exercise no important influence on the battle.

In accordance with the accepted principles of converging action, which seeks success by exerting from the outset the utmost pressure against the enemy's front and flanks, the general reserve was small consisting of two battalions from the 3rd division, which seem to have been kept in hand to meet some unexpected development.

The repulse of his right on the evening of 14th had caused the commander of the 3rd division to anticipate that the Russians would deliver an attack either during the night of 14-15th or early on 15th, and the troops consequently spent the greater part of the night in constructing such cover as the rocky nature of the soil allowed.

At 5-30 A.M. on 15th, when the morning mist had cleared off the hills, the 3rd and 13th artillery regiments opened fire on Lung-wang-miao and the Fu-chou valley from both sides of the Lung-chia-tun mountain, and soon afterwards the 15th regiment came into action against the Ta-fang-shin knoll from Wang-chia-tun. The infantry did not advance at once, partly to enable the fire of the artillery to produce effect, partly owing to fog in the valleys; and while awaiting the forward movement of the 5th division, the right and centre of the 3rd were attacked at 7 A.M. by the Russians in force and were soon hard pressed.

Hearing heavy firing on his right General Veda, the commander of the 5th division, with fine initiative decided at once to advance with the object of relieving pressure, and by about 9 A.M. the division had cleared the villages in the Fu-chou valley and had closed on the Ta-fang-shin height, while the Russian cavalry had been driven out of Lung-kou.

By 10 A.M. the Ta-fang-shin height had been captured, the mountain guns of the 5th division were established on the hills east of Lung-kou whence they were engaging the enemy in position near San-hsi-er, and the 13th and 15th artillery regiments were in

action near Ta-fang-shin against Lung-wang-miao and the enemy's troops in the Fu-chou valley.

Meanwhile the detachment from the 4th division consisting of the 19th infantry brigade, three batteries, and some cavalry, had reached the field, having gained at 9-30 A.M., after a trying march, the vicinity of Ma-chia-fang-shin which was occupied without opposition. A portion of these troops were then sent to Tung-lung-kou causing the Russian cavalry, now falling back from Sung-chia-tun, to withdraw hurriedly northwards.

Though all was going well on the left, frequent reports had reached Oku from General Oshima as to the critical situation of the 3rd division, one report, sent at 10 A.M. by the commander of the 17th brigade which formed the right of the division, being to the effect that so long as he was alive, and ammunition was available, the troops would hold the position. At this moment the divisional reserve had been reduced to one battalion, while the divisional cavalry were reported barely to be able to hold their own against an enveloping attack on Kou-yin. Oku therefore decided to despatch one of the two battalions of his general reserve to assist the 3rd division, and with this help and that of Akiyama's detachment which now, in response to demands for assistance, intervened in favour of the divisional cavalry, Oshima was enabled to maintain the position.

Meanwhile the 5th division, though much hampered by the fire of the Russian field guns, had by 11-30 A.M. closed to within about 1,000 yards of the Russians, who were in position along a line from San-hsi-er to the high ground about  $1\frac{1}{2}$  miles west of Te-li-ssu. The 19th brigade was co-operating with the 5th division by enveloping the enemy's right. At about the same time the hostile guns on Lung-wang-miao and in the Fu-chou valley were silenced. (Sketch 9.)

At noon General Oku received news that the leading battalion of a regiment from the 6th division had reached the field, and at once placed the remaining battalion of the general reserve at the disposal of the commander of the 3rd division, who sent it against the Russian infantry on Lung-wang miao.

An hour later the Russian resistance was overcome all along the line, and a retirement had commenced except on the enemy's extreme left, where the Russians, after withdrawing, had again begun to show activity.

By 3 P.M., the Russian right and centre were in full retreat covered by a rear-guard holding the hills to the north-west of Te-li-ssu and the railway station at this village, with which the 5th division and the 19th brigade were engaged. The infantry of the 3rd division were too exhausted for close pursuit, but caused the Russians heavy losses by their fire, and were able to secure thirteen guns abandoned on Lung-wang-miao and four mountain guns near Wa-fang-wo-pu. Four Japanese batteries were also placed on the Lung-wang-miao ridge whence they played effectively on the Russian

columns retreating over the spurs of rocky ridge and in the Fuchou valley. (Sketch 10.)

The troops opposed to Akiyama's detachment had also begun to give way at about 2 P.M., but here, as elsewhere, the pursuit was slack, and the Japanese cavalry instead of pressing forward on to the Russian line of retreat only followed the enemy at a respectful distance.

On the other flank a battalion of the 19th brigade did attempt to reach the railway by moving over the high ridge north of Te-li-ssu on Lung-tang-kou. Being at first opposed only by cavalry the battalion was able to gain a position commanding the railway line, but at 1-30 P.M. some Russian infantry arrived by train to the assistance of the cavalry, and soon afterwards the Russians received a further reinforcement, when the Japanese were forced back.

Further west half a battalion and a battery detached to Hsui-chia-tun from the main body of the 4th division, apparently as a flank guard, came into contact at about 11 A.M. with a force of Russian cavalry near this village and obliged them to withdraw towards Te-li-ssu. No attempt seems, however, to have been made to reach the Russian line of communication and the main body of the 4th division remained west of Hsui-chia-tun. The non-intervention of these troops appears to be a reasonable subject for criticism, for though apparently the bulk of the 4th division was intended only to undertake a protective rôle, the divisional commander, General Ogawa, can hardly have thought that by standing passively outside the area of operations he was contributing to the success of the second army.

As has been pointed out, the thunderstorm practically ended the battle at 3 P.M. The pursuit was not taken up after the rain had ceased, for the Japanese were exhausted by the heat of the early portion of the day and by their previous exertions, and in addition ammunition is said to have run short. No attempt was made to use the fresh troops of the 4th division for the pursuit, possibly because rapid means of communication with this division were lacking. In fact throughout the battle the Japanese appear to have suffered from inadequate means of communication.

Eventually two squadrons were sent to keep touch with the Russians, and the troops who had been in action halted in the Te-li-ssu valley. The main body of the 4th division went into bivouac near Chien-mei-tun.

#### COMMENTS.

Measured even by the casualties of the two armies the battle of Te-li-ssu must be considered as a notable success for the Japanese, who at the cost of about 1,100 killed and wounded inflicted on the Russians 3,000 casualties, besides capturing 17 guns.

Aided by the weather the Russians certainly extricated themselves with ability from a difficult situation, but even if it is admitted that the victory of the Japanese was not so decisive as might have been the case, there can be no doubt that in its moral aspects the victory of Te-li-ssu was of great importance, establishing

as it did the superiority, as a fighting machine, of the Japanese army over that of the Russians.

In the battle of Te-li-ssu equal courage and tenacity was shown by both sides, and victory inclined to the Japanese, because they were better led and co-operated with greater effect.

The Russians owed their defeat mainly to the cumulative effect of a series of mistakes, small and great, committed by all ranks; such as the failure of a squadron leader to discover the presence of a Japanese division near Fu-chou; want of precision in the orders issued by the staff; lack of co-operation on the part of Generals Glasko and Gerngross; faulty dispositions and lax supervision by Stackelberg.

It must not be supposed that the Russian officers were as a body incompetent, for this was by no means the case. Stackelberg, for instance, was an able and resolute general who had the misfortune to meet a better man commanding better troops, and his actions therefore suffer by comparison with those of the victor.

On the Japanese side errors were also not absent—they never are absent in war, but fewer were made than by the Russians, and hearty co-operation and mutual support by all ranks, prevented the mistakes which were made from exercising an important effect on the issue of the fight.

The great lesson of the battle is therefore that success in war is gained by efficiency and co-operation, and that battles are won not merely by courage, but by courage wisely directed and adequately controlled.

Another important lesson is the vital necessity of crowning local success by effective pursuit.

A defeated army soon recovers its efficiency if not vigorously pressed. For instance, in 1813, the French, though beaten and disorganised at Vittoria, where the bulk of their artillery and baggage was captured, were for various reasons not followed with vigour. In one month the French army was consequently able to assume the offensive, and with such energy that the British narrowly escaped defeat.

Doubtless on the 15th June the day was hot, the hillsides rough and steep, and ammunition was running short, but if this was the case with the victors what must have been the condition of the vanquished? It cannot, therefore, be considered that the excuses offered for the absence of pursuit afford adequate reasons for its abandonment.

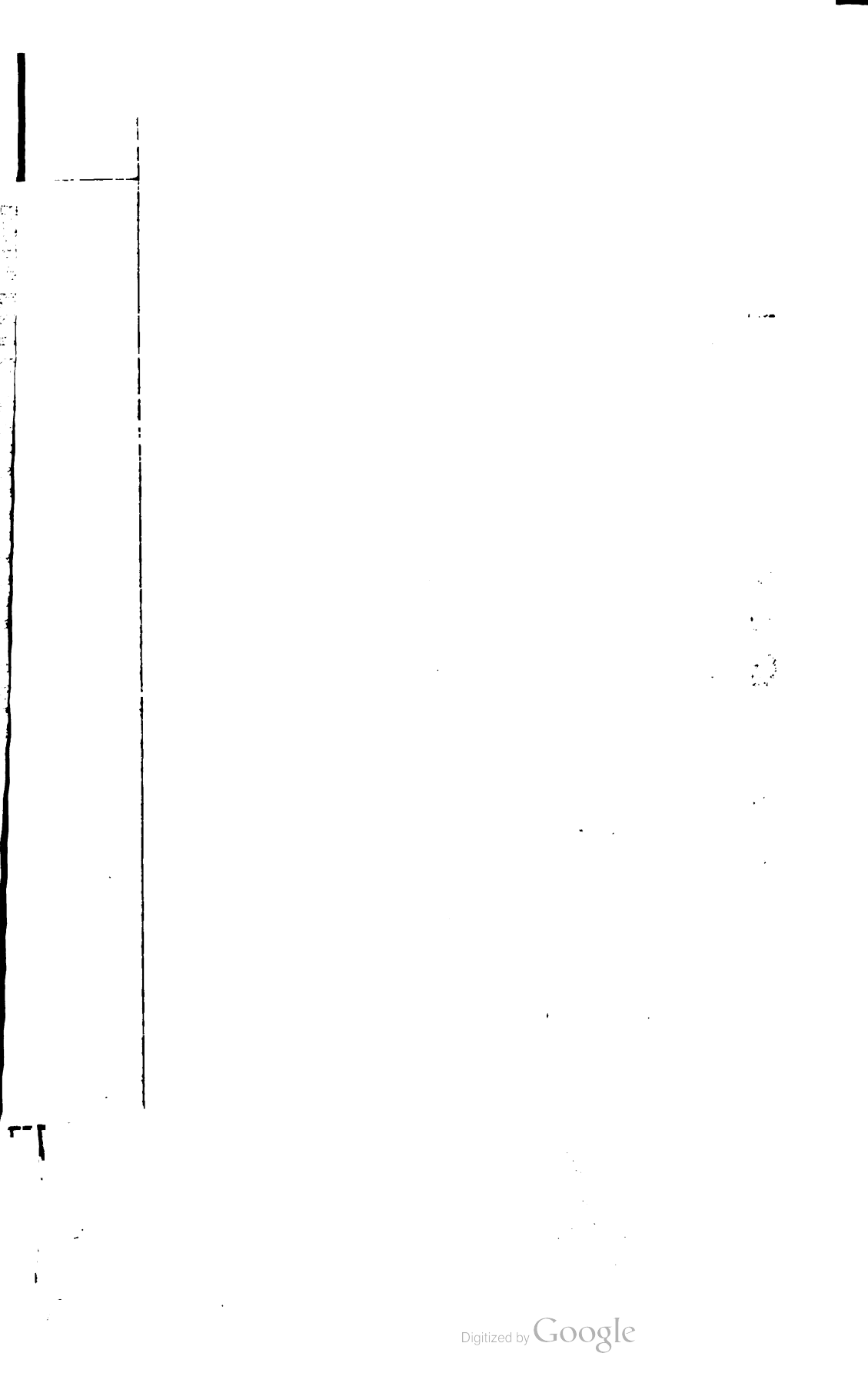
As Napier has remarked, "if Caesar had halted, because his soldiers were tired, Pharsalia would have been a common battle." Caesar made the most of his success and consequently destroyed Pompey's army, of which 15,000—20,000 men were killed or disabled and 24,000 captured.

In the battle of Te-li-ssu the two general systems of attack described in the Field Service Regulations were used, the Japanese relying on a converging movement, while the Russian commander strove to force a decision with his reserves. That neither system

possesses advantages calculated of themselves to insure victory is clearly shown, and it is evident that success is attained not by the form of attack, but by the manner in which the attack is carried out. Nevertheless it may be inferred that since the success of the second system depends on the timely delivery of the blow, greater skill and judgment are required than when the more simple method of converging on the enemy is employed. On the other hand, a converging operation in which a commander irrevocably risks everything on one throw, demands exceptional nerve and character.

In studying a battle or campaign it is unfortunately true that the errors of the commanders stand out with special prominence, while the correct actions seem so commonplace and "obvious" that their merit is apt to be overlooked. Those who fail to recognise the fact that to act correctly in the turmoil and stress of war require qualities far above the average, therefore commonly come to the conclusion not that war is the most difficult of all arts, but that commanders are weak, vacillating, and incompetent men, whose successes, when gained, are largely due to good fortune. It is hardly necessary to remind soldiers that this is a profound error, and that the military student is struck with wonder not that commanders make mistakes, but that so few are committed.

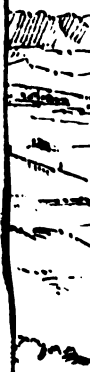
Just as it is not difficult for the spectators at a football match to observe the mistakes of the players, so any reader of military history can point out the errors committed by the principal actors in a campaign. Military history is studied not for the purpose of indulging in cheap criticism, but with the object of ascertaining the principles which, if followed, command success in war.



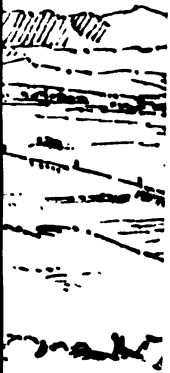




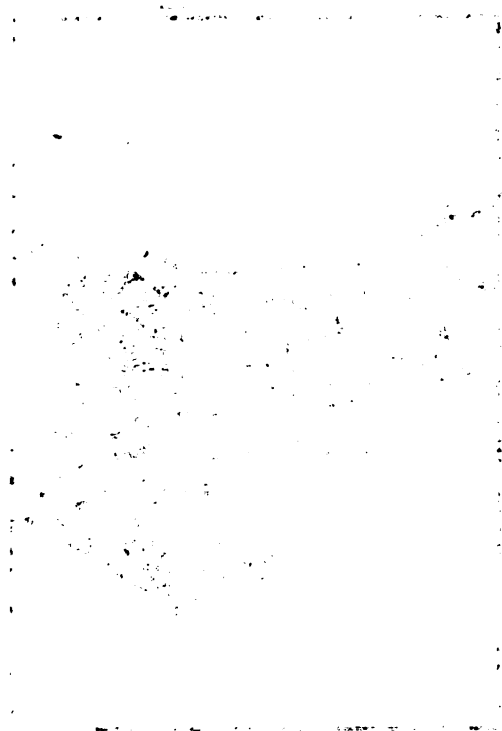




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## LOCAL CORPS IN INDIA AND THEIR MILITARY VALUE.

BY CAPT. J. P. STOCKLEY, 102ND GRENADIERS, OFFICIATING  
COMMANDANT, MEWAR BHIL CORPS.

A book has recently been published, written by an Indian Civilian, Mr. A. H. A. Simcox, Collector of East Khandesh, which describes, as fully as the most careful search amongst old records will allow, the original raising of the Khandesh Bhil Corps, by the famous Sir James Outram, then a Lieutenant, and its history up to its final disbandment in 1891.

The book is dedicated to lovers of Khandesh, but is also of interest to soldiers, not only from the memory of Outram, but because the Khandesh Bhil Corps as raised and organised by him, formed a model for other local corps in Rajputana and Central India. These, though now in most cases changed into regular regiments, still exist, and all did good service in their time under the old system.

The signal success of Outram's Bhil Corps, also of the corps modelled thereon and the very valuable services they performed in the Mutiny, justify some inquiry into the method on which they were organized and the merits and defects of the system itself. It may be worth considering finally whether there is any useful place for such corps in a modern military organization.

The first instance of a local corps in India was probably the Bhagalpur Hill Rangers raised by Augustus Cleveland in 1786 from the Paharias of the Rajmahal Hills in Bengal, an account of which can be found in Mr. Bradley Birt's book, "The Story of an Indian Upland."

Then followed the Khandesh Bhil Corps raised by Outram in 1825, and on the same model the following corps were raised in Central India and Rajputana:—

The Mhairwara Local Battalion raised by Captain Hall from among the Mers of the Hill Tract of Ajmer-Merwara in 1825. The Mewar Bhil Corps by Captain Hunter in 1840 from the Bhils of the Hill Tracts of Mewar in 1840. The Malwa Bhil Corps in Central India, the Mina Companies of the then Kotah Contingent, now the 42nd Deoli Regiment, and the Mina Companies of the old Jodhpur Legion now the 43rd Erinpuras.

The object of Government in raising these corps was always the same, *viz.*, to pacify and reduce to order the hill tribes, who till then had lived largely by plunder and had successfully resisted all efforts of the Native States to subdue them, even when assisted by British troops.

The success of the local corps in achieving this object was complete, and bears eloquent testimony to the soundness of the

system and to the fact that in those early days men could be found willing to devote their whole service and often their lives to a work of extreme difficulty and hardship with but little prospect of either honours or distinction. Not only to Outram but also to the founders of the other local corps in Rajputana and Central India is the fine inscription on the tomb of Cleveland at Bhagalpur applicable—an inscription now best known by reason of its having been copied by Kipling into one of his Indian stories.

There is not space here to attempt to trace the gradual progress of the local corps from the early days when in the case of some the men attended in the morning armed with bows and arrows only and had to be paid daily to allay their suspicions; but before 1857 the original purpose of keeping order and to some extent civilising the Hill tribes had been accomplished.

At the same time the service attached them strongly to the British rule not only by reason of the pay and prosperity which the corps brought into a naturally poor country, but also by the protection the hillmen obtained from their British officers against the rapacity of their native rulers.

The Mewar and Malwa Bhil Corps have been converted into Military Police, and the former at least still presents an interesting survival of the original system.

Having now given a brief account of the origin and progress of these corps, it is possible to consider the merits and defects of the system under which they were originally raised.

Sir George Lawrence in his memoirs attributes the loyalty of the Mers to the fact that they formed a class apart from the then regular regiments and were thus unaffected by their feelings and grievances. The same holds true equally of both Bhils and Minas, but something more is required to account for the fact that these wild tribes who not many years before had been in arms against us and who could not help seeing in the temporary collapse of our power a unique opportunity for loot and plunder, not only remained loyal but fought bravely for our cause.

In the first place these hill tribes though they differ largely from each other were all both naturally and traditionally opposed to the Hindu and Mahomedan orthodox classes with whom they had always been in a state of perpetual feud. To this day the Bhil, for instance, is regarded by both as almost, if not quite, outside the pale of humanity and in former days was usually killed on sight. On the other hand, they had learnt to regard the Sirkar and more especially their own British officers, as their protectors and had become strongly attached to them.

By a very wise rule the Commandants of the local corps had, in addition to their military duty, the civil or political charge of the district from which the corps was raised.

As a consequence they acquired a very strong hold both over their men and their districts, and were in fact regarded in an almost paternal light. The advantage of this arrangement in certain cases

has been frequently demonstrated not only in Khandesh and Rajputana, but in the Punjab in old days and on the frontier.

Comparatively small notice, however, was taken of any of these corps and their peculiar military value passed unrecognised till the Mutiny broke out in 1857.

It was then found that amid the general defection of the Bengal Native Regiments and in many cases also of the irregular contingents of the Native States, these local corps remained firmly loyal and obedient to their British officers. So much was this the case that when the Kotah Contingent mutinied, the local Mina companies attached to it were entirely unaffected and remained steadily loyal.

The fine record of the Khandesh Bhil Corps which was rapidly increased to two battalions of 1,000 each to meet the emergency can be read in Mr. Simcox's book. In his memoirs Sir George Lawrence, who was in charge of Rajputana at the time declares that it was the loyalty of the Merwaras and the despatch of some companies from their station at Beawar to Ajmer which saved this important centre at the crisis.

The Mewar Bhil Corps remained loyal throughout and besides maintaining order in the hill tracts in very difficult circumstances sent at one time two companies to join the Field Force operating against Tantia Topi.

It is not possible to describe here without the aid of numerous records the full part played at the time by the local corps in Rajputana, but there is no doubt that they proved invaluable to the Local Government. After the Mutiny was suppressed, they were largely recognised and the Merwaras and Deolis saw service on the frontier. Gradually under the pressure of circumstances, all save the Mewar and Malwa Bhil Corps became assimilated to the regular forces, till at the present time the 42nd, 43rd and 44th Regiments are as regards establishment training and terms of service the same as the rest of the Indian Army, though still stationed in their old cantonments.

It was the system on which many of the great soldier-civilians of the early days of the Punjab raised regiments now distinguished in the Army List and though obviously impossible for the highly trained troops of to-day, its suitability for the internal defence of remote districts is still deserving of study.

The local corps were also comparatively inexpensive, for the pay of the men was small, whilst the number of British officers was never more than three or four at the most. These, however, were naturally in their isolated stations thrown into very intimate contact with the men, whilst by reason of a certain amount of civil and district work being put into their hands, they acquired an invaluable knowledge of the character and sentiments of the hill population.

Service in the ranks of the corps was immensely popular and contentment went a long way to produce loyalty. The pay, though small, was sufficient for men who were all able in addition to

cultivate their fields regularly. Moreover, a sepoy could always get a personal hearing and redress from the Commandant for his grievances or those of his village ; a little experience of the details of civil administration and the amount of petty extortion and oppression that goes on, will convince any one of the force of this attraction. In consequence a sepoy or pensioner stood high in the estimation of his fellows and recruits were always plentiful. To this day it is probable that most of these corps could raise sufficient recruits for a second and even a third battalion at short notice—the Mewar Bhil Corps certainly could.

Such then were the principal merits of the local corps system. Its defects from the standpoint of modern military training are obvious enough. The isolated stations, the small number of British Officers, the lack of combined training with other troops on manoeuvres and the numerous detachments on escort and other duties, all militate against the high standard of training essential for regular troops. The corps indeed were never intended originally for general service, the men being enlisted for service in Rajputana and Central India. It must be admitted, therefore, that corps still maintained on the system cannot be classed as other than second line troops, suitable for internal defence, and thereby releasing more highly trained battalions for service in the field.

The question remains whether there is a place for such corps in our modern organization, and whether they are, from a purely military point of view, and apart from any civil or political considerations, worth the cost of their maintenance.

To judge this one must realize clearly our military position in India. The trend of recent events in Persia is clear enough. Before many years we must expect to find our frontiers practically co-terminous with Russia in that direction, whilst on the eastern frontier China may have developed into a strong military power. It is certain that a war in the future will strain to the utmost our military resources. Every trained battalion available and more will be needed for the field armies and their lines of communication. It may be possible at the start to leave behind troops for internal defence, but reinforcements to make up the inevitable wastage in the field will soon be imperative. Meanwhile the excitement in India is bound to be intense, no censorship yet invented will prevent the most alarmist rumours from circulating in the bazars and districts, and the belief that our rule is threatened is sure to result in lawless outbreaks throughout the country.

It is then that any dependable troops will be more than welcome even if not highly trained.

For this purpose the hill tribes of Rajputana and Central India are possessed of certain valuable qualifications.

Their position causes them to be unaffected by any religious or political disaffection, even if widely spread, whilst circumstances have attached them strongly to the British rule on which their prosperity is entirely dependent.

At the same time they have remained poor and would be easily attracted to service by good pay, so that a small corps could be rapidly expanded into a respectable force. The men are sturdy and obedient, a high standard of training would not be necessary and their fidelity at least could be relied on.

In this connection it is interesting to read in Mr. Simcox's book the reasons for the disbandment in 1891 of the Khandesh Bhil Corps, which after the Mutiny was converted into police. From a purely civil point of view they are unanswerable.

The Bhils made bad police, they were illiterate and being split up into a large number of small posts on police duty weakened their discipline. To maintain even a small body on a semi-military footing was held to be an unnecessary expense, when the district was entirely peaceful. In spite, therefore, of its valuable services in the Mutiny the corps was disbanded, but whether the economy thereby effected was so great as supposed is perhaps now open to question. A small body maintained on a military footing would by judicious recruitment have kept alive the military spirit and tradition of service amongst the Khandesh Bhils. It could have been employed on certain guards and escorts as apart from ordinary police duties and would as before have been capable of great expansion on an emergency. It is easier to disband such a corps than to replace it, should the need again arise, for once recruiting is stopped the military spirit does not long survive. The time may yet come when Outram's old corps will be badly missed.



## SOUTHERN ARMY PRIZE ESSAY, 1912.

By CAPT. J. T. C. BROADBENT, 80TH CARNATIC INFANTRY.

**SUBJECT:—The qualities essential for War in His Majesty's soldiers in India and how best to develop them.**

The subject of this essay involves the discussion of the qualities essential for war in British as well as Indian soldiers, but partly for want of space and partly because the early training of British soldiers (the period in which the seed of all 'military virtue' must be sown) is not carried out in India, I propose to discuss the question mainly as regards His Majesty's Indian soldiers, touching where necessary on those qualities in British soldiers rendered essential by the conditions of their service in India.

To a very large extent, of course, the qualities essential for war are the same for both, and indeed for all soldiers, but methods of developing them must vary in accordance with racial characteristics.

I propose to divide the essay into two parts, as suggested by the title. Part I enumerates and discusses the qualities considered essential in the individual soldier, if he is to play his part in war efficiently. Part II deals with the most effective methods of developing those qualities.

Part I will be sub-divided as follows:—

- (a) Qualities essential in soldiers for war in general.
- (b) Qualities necessitated by certain forms of war, the conditions of which are peculiar to India.
- (c) Qualities essential for war in His Majesty's soldiers in India, with reference to the lack of homogeneity among them.

The sub-divisions of Part II will naturally and necessarily follow that of Part I.

### PART I.

- (a) Qualities essential in soldiers for war in general.

Before attempting to write anything on such a subject, one turns naturally to the pages of the greatest

Clausewitz on War,  
Book III, Chapter V.

of all writers on war, and in Clausewitz's chapter on 'Military virtue,' we find much if not all we require. I think I cannot begin better than by giving one long but pregnant quotation.

"An army which preserves its usual formations under the heaviest fire, which is never shaken by imaginary fears, and in the face of real danger disputes the ground inch by inch, which, proud in the feeling of its victories, never loses its sense of obedience, its respect for and confidence in its leaders, even under the depressing effects of defeat; an army, with all its physical powers inured to privation and fatigue by exercise, like the muscles of an athlete; an



army which looks upon all its toils as the means to victory, not as a curse which hovers over its standards, and which is always reminded of its duties and virtues by the short catechism of one idea, namely, the *honour of its arms*. Such an army is imbued with the military spirit."

"An army, in each man of which burns such a spirit as this may appear an impossible ideal, yet it is only by placing our ideal high that we shall accomplish anything, and it is just such qualities as those indicated which are as essential now as ever. And for modern war we require even more, in addition to steadfast courage, loyalty, great powers of endurance, and enthusiasm for the profession of arms, we must seek to develop in our soldiers a trained intelligence and the will to use it—in other words, they must have initiative."

"A hundred years ago, a whole battalion, more, a whole brigade fought under the eye of its commander: to-day it is scarcely too much to say that each man fights alone, and we require from him intelligent co-operation rather than blind obedience."

A very slight extension of Clausewitz's thought will meet our modern need, for a little further on in the same chapter, he writes:—"The general can only guide the whole, not each separate part, and where he cannot guide the part, there military virtue must be its leader."

If now, we slightly alter this passage, so as to read thus:—"The company commander can only guide the whole company, not each separate man, and where he cannot guide the man, there military virtue must be his leader," we may include, in Clausewitz's all-embracing term, 'military virtue' all those qualities essential for war in the modern soldier.

A word may be said here on the subject of adaptability; this is a quality that has always been essential in the soldier, but nowadays the need for it requires to be emphasized, for the possible range of military operations for His Majesty's soldiers has been considerably extended, and the soldier must be ready to do his duty in all climes and under all sorts of conditions.

In concluding this part of the subject, I would like, in view of the loneliness of the soldier in action, to lay stress on the need for developing to a higher degree than heretofore the quality of courage.

It is one thing to advance shoulder to shoulder with your comrades, and begin fighting when you have your enemy fairly in view; and quite another to advance across a bullet-swept zone against an invisible foe, with the men on either side of you so near that you can see them fall, and yet so far that you fail to derive any moral support from their proximity. "Risquer sa vie à chaque pas pendant des heures entières n'est pas un jeu pour le commun des hommes; aussi, quelque soit l'adversaire qui lui fait face, l'homme au combat n'a qu'un ennemi,—la peur, et c'est celui dont il parle le moins volontiers."

Grandmaison, quoted  
in Colin's *Les Trans formations de la Guerre*, p.  
66.

If this be true, if fear be the soldier's worst enemy, nay, his only enemy in battle, then the development of courage must be our first care.

(b) Qualities necessitated by certain forms of war, the conditions of which are peculiar to India.

In considering this part of our subject, we must ask ourselves where and against whom the soldier in India is likely to have to fight; and this question may be answered briefly as follows:—

(1) In Afghanistan, Baluchistan, or Persia against the Russians.

(2) On the North-West Frontier either in, or on the borders of Afghanistan, against the Afghans or the fierce border tribesmen.

(3) On the North-Eastern Frontier against savage but ill-armed Mongolian tribes.

(4) In Northern Burma against the Chinese.

(5) Within the Indian Empire to quell any insurrection or internal rising.

(6) Beyond the seas, against enemies of the Empire, civilised or savage, according to place and circumstances.

Here we have several possibilities of war under widely differing conditions, but it is only with regard to number (2) and to a less extent to number (3), that it is necessary to add any new quality to the list already enumerated in (a).

Against Russians or Chinese, or any one having the semblance of organization, and who attempt to make war in what may be called regular fashion, it will be sufficient if our soldiers are possessed of that military virtue I have attempted to describe. As regards number (6), war beyond the seas, there are possibilities of war under so many diverse conditions, that we must perforce rely on those qualities in our men, which we endeavour to develop for war under normal conditions, and particularly on their adaptability to new circumstances.

As regards number (5) in any internal rising great or small, we shall derive our best chance of success from the personal loyalty both to their sovereign and their officers, with which we have been able to inspire the men, and from the general state of discipline throughout the army, for under no circumstances are discipline and loyalty more sorely tried.

It is in our frequent frontier wars that we have to deal with an enemy and serve under conditions, which call for certain special qualities in our soldiers.

The Pathan and his methods, his tactics, his guile, his wonderful activity, his very appearance are peculiarly daunting to any one unaccustomed to them, while the country in which he operates is of the most forbidding and difficult description; to cope with him successfully we want something more in our soldiers than is required in those of the average European army.

No mere adaptability, no ordinary initiative and self-reliance will answer our purpose, our men must have cunning equal to that of the Pathan himself, combined with the ability and resolution to

see and seize fleeting opportunities, for it is only thus that we can hope to get even with the hillmen of Tirah and similar countries.

These remarks apply to some extent at least to operations against the savage tribes on the North-Eastern Frontier, but the latter are ill-armed, and have never displayed that genius for war peculiar to the North-West Frontier tribesmen.

(c) Qualities essential for war in His Majesty's soldiers in India, with reference to the lack of homogeneity among them.

No army in the world comprises so many heterogeneous elements as that of His Majesty in India, and this fact is, or at least may be, a serious disadvantage in war.

First of all, there is the broad dividing line between European and Indian soldiers, and then amongst the latter, there is every kind of division of race, nationality, religion, class, caste, tribe, etc.; in dealing with all these divisions, we have to contend with deep-rooted prejudices, traditional enmities, class and caste feelings, and even facts must be reckoned with, for the disregard of them may be fraught with serious consequences.

To be successful, it is certain that their work must be harmonious. If then His Majesty's soldiers in India are to work harmoniously side by side in that most trying of all human activities—war, it is essential that we should develop in them a spirit of broad tolerance for the prejudices of others, combined with that 'true soldierly comradeship' spoken of by Sir Edmund Barrow in his farewell message to the Southern Army.

## PART II.

(a) We now turn to the consideration of how we may best develop those qualities which we have enumerated as being essential in our soldiers for war.

Clausewitz at the end of the chapter on Military Virtue, from which we have already quoted at length, says:—

"This spirit can only be generated from two sources, and only by those two conjointly; the first is a succession of campaigns and great victories; the other is an activity of the army carried sometimes to the highest pitch. Only by these, does the soldier learn to know his powers."

Fortunately for the world at large, if unfortunately for the efficiency of armies, campaigns are no longer very frequent, and great victories still less so, while under modern conditions it is impossible to imagine 20 years of incessant war, such as Clausewitz had had experience of. War has become the test, rather than the school for armies, and we must, in time of peace, somehow develop those qualities in our soldiers necessary to make them successful in war. Without doubt, our numerous small wars do much to keep alive the true military spirit in His Majesty's soldiers in India, but neverthe-

less, it is mainly in cantonments, in camp, and on manœuvres that we must prepare our men for war on a large scale.

It is by yet another quotation from Clausewitz, that I must introduce the first of my suggestions for the development of those qualities we desire:—"The more a general is in the habit of demanding from his troops, the surer he will be that his demands will be answered. The soldier is as proud of overcoming toil, as he is of surmounting danger."

Let us then demand much from our men, resting assured that the more we ask the more we shall get. By this I do not mean to suggest that we should have long drill parades, or that we should work our men ten hours a day, all the year round; no soldiers would stand it, with the possible exception of Japanese, but long days which the men remember, we must have, and in camp and on manœuvres, we should not shrink from, occasionally at all events, working all ranks to the utmost extent of their powers, for it is only so that those powers will be materially increased.

It is wonderful how the men remember four or five really hard days on manœuvres, and how thoroughly pleased they are with themselves over the performance. Ever after, when sorely tried, they may be heard to say, "Oh this is nothing to what we did at——— in———," and this is precisely the spirit we want, for it keeps up the older men, encourages young soldiers, and last but not least, is most encouraging to the officers.

This applies to both British and Indian troops, it may quickly become a matter of personal experience to any officer, and moreover is supported by the evidence of military history; such men as Stonewall Jackson and Nicholson, not to mention names more famous still, have proved that those leaders get most out of their men, who spare them least. And let us not forget the nature of the service which such officers demanded and obtained from their men, for it is the essence of what we must strive for; it was not the helpless unwilling labour of slaves, but enthusiastic willing service born of mutual confidence and good-will, ennobling the men and highly creditable both to them and their leaders.

We may note here too the personal devotion which such men as Jackson and Nicholson inspired, for it is a thing to be reckoned with, a force to conjure with, and all officers should strive to win the devotion of their men.

It may be argued that devotion is a thing past striving for, that some officers get it and some do not, according as they are made, and that those who seek it least often obtain it most easily. There is much truth in this contention, and it must be admitted that the British soldier, the least emotional of his kind, is an unpromising subject for efforts of this sort; with the Indian soldier, however, it is entirely different, he is extremely susceptible to the display of any interest in his concerns and capable of the highest devotion to his officers, and few officers will fail, if they go the right way about it, (it is difficult for them to go wrong if their interests in their men is real

and not feigned), to win the devotion of their sepoys, and nothing can be more valuable in the day of battle.

So much for hard work, and before going further it may be as well to state clearly what qualities we may hope to develop in our soldiers by demanding great exertions from them. Those qualities are—patient endurance (active rather than passive, *e.g.*, the endurance of a boxer who patiently endures severe punishment, but is merely waiting his chance to get even with his opponent, and is dangerous all the time; not the helpless endurance of a beaten slave), perseverance, a spirit of emulation, a useful kind of courage which schoolboys call ‘stick-to’ confidence in themselves, born of knowledge of their own powers, and if officers are sympathetic and spare themselves as little as they do their men, mutual confidence and esteem. Also on manœuvres men may learn to bear privation of all sorts cheerfully, and it may be said that hard work generally is an excellent antidote to the somewhat luxurious life of the modern soldier in cantonments.

It is in camps and on manœuvres too that we can best develop in the men the necessary adaptability. Adaptability may be defined as the common sense application of principles to new situations, and our endeavours must therefore be to make the men first thoroughly understand the principles contained in our manuals, and then by constantly devising new problems to make them bring their latent common sense into play.

This brings us naturally to the subject of initiative, and we may confidently begin by saying that we cannot begin our efforts to develop it too early.

From the day the recruit joins, we must endeavour by every means in our power to make him believe that we expect from him intelligent co-operation and *not* slavish obedience; only so can we hope to dispel the stolid indifference of the British soldier to all attempts to arouse his interest, and only so can we hope to avoid the hopeless ‘*hukm nahin*,’ that most exasperating of all excuses for a man not behaving as he should.

Various methods have been suggested for stimulating the interest and drawing the intelligence of soldiers, but nearly all resolve themselves into a series of questions by the officer which severely tax his inventive powers, and merely bore the young soldier, or at best excite in him a mild wonder.

The best and only method, I think, is to treat the recruit from the beginning as a human being and as a prospective useful comrade; we must let him know that we expect to find him intelligent (here again the more we ask, the more we shall get), and if he does a silly thing, he must be shown and the others must be shown that it is silly, and why it is silly, and if there is some laughter and a little good natural chaff, so much the better, there is no harm done, and the delinquent will think in future and laugh in his turn at some one else later on.

There must of course be no hint of sarcasm in the way mistakes are pointed out, for never is the gap so wide between an officer and his men as when the former allows a sarcastic tongue to get the better of him. Nor must the stupid ones be allowed to afford too much amusement to the more intelligent.

Equally, of course, there must be no weakness on the part of the officer in the punishment of crime; it goes without saying that weakness in this respect would have the most disastrous results.

This method may be followed with soldiers of all classes, of all rank, and at all periods of their service, and I am very sure that it will be found successful, provided there is nothing artificial in the attitude either of the officer or of the men.

There may be some who still distrust methods of this sort, as being derogatory to the position and dignity of officers and incompatible with true discipline, and one can only say that it need not and should not be so, and that some such method is practised, often unconsciously, by many of the best regimental officers and with the happiest results.

It may be objected that this is all very well, but that no practical method of developing initiative has yet been put forward; my answer is that we must begin at the beginning, we must train a man to think, and the initiative will grow of itself. I have tried to enunciate a principle, there are many ways of applying it, *e.g.*, working the men in small patrols, games, etc. (much has been written on the subject), but the underlying principle should be to get at the man himself, to make him believe that he is something more than a mere pawn on a chess-board.

Much can be done by encouraging education among the men, some people are afraid of it, but whether there are dangers or not, we have gone too far to go back, and any temporary disadvantages will be swallowed up in the ultimate gain.

*Courage.*—Can we teach courage, can we make a coward brave? The answer is—We must, for the men so brave by nature as to be able to stand the strain of a modern battle, are few and far between. The question then is—How?

First, as in the case of initiative, let us begin early. We should, I think, take a lesson from the Japanese in this respect, and institute a definite system of moral training from the very first day of a man's service.

It should be impressed on a man at the very beginning that he has voluntarily entered the most honourable of all professions, that of service to his sovereign and country; that from the very nature of that service he will frequently be called upon to bear hardship and discomfort, and that he will probably some time or another have to endanger his life in the performance of his duty; that therein lies the glory of the profession of arms, and that therefore the soldier who fails in any duty through fear is of all creatures the most heartily to be despised.

I do not think regular lectures should be given on this subject, though a little moral instruction may well find place in lectures on other subjects, but the officer should seek and create favourable opportunities for touching on these things. If a regular lecture on such a subject is given, say, once a week, interest is liable to flag, and the results are likely to depend largely on the capacity of the officer for making his lecture interesting, and few of us possess this gift to any useful degree; moreover, as in the case of physical training, a little every day is far better than an hour once a week, and does much to enliven the long hours of recruit drill.

In the case of Indian soldiers, much may be done by means of story-telling. The stories are best taken from military history, best of all from regimental history, but it is by no means necessary to keep to this restricted field, and should tell of deeds of heroism and devotion.

I must confess, I should rather shrink from trying this method on British soldiers; as I have said, they are prosaic and unemotional, and heroics do not appeal to them much, but I can imagine that there are moments when some apt tale of heroism would arouse great interest, and have proportionately good result. With Indian soldiers, there can be no doubt about their interest, and I think stories can be made a really valuable form of moral training. If the story be well told, so much the better: the Japanese, I believe, employ professional story-tellers for the purpose, but this is by no means necessary, for the men listen greedily.

The present writer who has small reason to congratulate himself on his powers in this direction, recently had experience of this fact while relating the stories of Captain Ramsay's famous charge with his horse battery at Fuentes d'Onoro and the charge of the Light Brigade in the Crimea. The stories were suggested by a picture, a very indifferent picture which I first took to represent the former event, and subsequently found it was intended to depict the latter; it served its purpose however, and got two stories out of me instead of one.

I know an officer who is having translated for the benefit of his men, the accounts of all the deeds that have won the Indian Order of Merit, and I am sure it is an example which might be followed with advantage.

Much may be done too by inducing a man to take a pride in himself and his profession, and in his personal appearance. A man should be made to feel that he is disgracing his corps and his profession by going about in slovenly fashion, and shabbily dressed. I know an Indian officer who, when he was Jemadar Adjutant of his regiment, used invariably to impress on recruits that wherever they went and whatever they did, in the lines or in the bazaars, they should never forget that they were soldiers; moreover that there should never be any doubt in the mind of any one as to what they were, it being patent to all from their smart appearance and soldierly bearing, not only that they were soldiers, but that they could only

belong to one corps. I know that this advice had most excellent results. Further, every effort should be made to keep the men up to the tenets of their religion. Should a Muhammadan drink or a Sikh touch tobacco, he should be reminded of his faith and made to feel it a disgrace.

"Always keep the men up to their 'izzat'", was the advice once given me by an officer of great experience, and I am sure the advice was wise. I may seem to have wandered far from my subject, but all these things enter into moral training and it is moral training that generates courage.

So much for the subjective side of the question. As objective means to the development of courage in our men, I think we may, first of all, once again take a leaf from the Japanese book, and pay much more attention to bayonet fighting.

The value of the bayonet as a means of encouraging men to go forward at all costs has never, I think, been fully realized in our service.

If we can succeed in giving our men such confidence in the bayonet, that they may feel in action that, if only they can get to close quarters with their enemy, all will be well, we shall have done much to help them in their hour of need.

Such confidence can only be acquired by constant practice and real teaching. A man may feel that his enemy sitting behind cover and using his rifle has him at a disadvantage, but if he has real confidence in his bayonet, he will also feel that, if only he can get within bayonet range, the advantage will pass over to him; and sharpened by revengeful rage there can be no more effective spur to forward movement, and no greater stimulant to the grand offensive spirit.

Secondly, games and sports of all sorts will help us materially in this respect. They at least teach a man to make light of lesser but stinging hurt, not to work for himself alone, and that he can accomplish little in manly pursuits, without endangering his skin to some extent.

(b) We must now turn to the question of how we may best develop those qualities in our men, which are essential if they are to meet the wily Pathan on anything like equal terms.

It must be admitted at once that without the necessary conditions, of terrain at least, the task is far from easy, but a good deal can be done by practising over the best ground available, and systematically teaching the men both the nature of the Pathan and his methods. We can point out to them his strength and weakness, his good and bad points, the ways in which he has been outwitted in the past, and by examples, the folly of neglecting the lessons of past experience. Perhaps the best way of teaching Indian soldiers this kind of warfare, and certainly the way they like best, is to train them as a savage enemy of the hills for at least a couple of months. This has frequently been done in large stations, with only moderate



facilities for the purpose, for the benefit of the whole garrison, but I certainly think that those who learn most are the savage enemy, and no better method of training the men to use their wits, and give them an eye for country could possibly be devised.

(c) How are we to generate a spirit of true soldierly comradeship throughout the army in India?

I have mentioned this comradeship as an essential quality and I think few will deny that it is so, but it is very difficult to say how we are to set to work to develop it. It is a subject that is, as a rule, left severely alone, and it is a deplorable fact that the tendency amongst officers generally, is rather to accentuate rivalries and encourage feelings of, I had almost said, enmity, between their own men and those of other corps, in some false spirit of *esprit de corps*. It is not of course done consciously, but cases where officers have backed up their own men, when obviously in the wrong, in some difference with the men of another corps, are probably within the experience of most of us. I have also heard officers speak slightly of other classes of His Majesty's soldiers in the hearing of their men, and this kind of thing cannot be too strongly deprecated; the results are far reaching and may have most evil consequences.

That officers should be partial to their own men is both natural and right, and it is extremely easy to fall into error in cases of the sort mentioned, but feelings of this kind carried to extremes are wholly wrong, and if we can get the better of them, we shall have gone far towards making the ideal, of comradeship possible, but I am unable to suggest any positive means for developing this quality.

So far as the differences between British and Indian soldiers are concerned, I think something could be done by officers of British corps by explaining to their men the prejudice and idiosyncrasies of Indian troops as opportunity offers; Indian soldiers are not very likely to do anything to arouse the animosity of their British comrades if left alone, but the European soldier is very liable, all unconsciously, to tread heavily on some very tender corn.

The differences between the various classes of Indian troops are much more difficult to deal with, they are far more under the surface, and any one who has tried will know how difficult it is to get to the root of a grievance and on what dangerous ground he treads in his investigations, and I am inclined to say that the best we can do is to encourage friendly intercourse and sternly repress any signs of strife.

Games and competitions of all sorts are much fancied by some officers as a means towards effecting the end we have in view, but I fear that in this respect, at any rate, they are a failure; the reason is that it is very difficult to get soldiers, British as well as Native, to play games in true sportsmanlike fashion. With Indian troops, their opponents are the 'dushman' in the fullest sense of the word, and differences on a hockey field may go a very long way indeed. I think that, in this respect, the best that can be said is that

inter-corps games and competitions, properly supervised, do no harm, though of course they have an excellent effect in many other ways.

I do not think we need be pessimistic on this subject; taking everything into consideration, the feeling under this head, throughout the army in India, is remarkably good, but there are elements of danger, and it is not well to ignore them.

In concluding this essay I would like to enter a plea for more soul in our training generally, somewhere, I have seen our system described as soulless, and the criticism needs little justification. We are a practical race and we base our training on what appears to be sound lines, because the results are material and visible. Could we put more soul into our system, I believe the effect everywhere would be good, and on Indian troops little short of magical.

I have said little of patriotism, *esprit de corps*, and other similar qualities, appeals to which are largely recommended for the development of moral in soldiers, but any officer attempting to train his men on the lines I have tried to indicate will certainly have much to say about them. I have also practically omitted all mention of discipline as a factor in moral education, it is of course invaluable, but its effect is too well known and has been too widely discussed to need repetition.

The soldier we want to produce is a well drilled, well disciplined, well conducted man, who can think and act for himself, and whose pride in himself and his profession will never let him shirk his duty, however distasteful and however dangerous; and we shall only produce him by making our appeal to the man himself, to the unseen as much as to the seen.



## NIGHT OPERATIONS OF THE JAPANESE IN 1904.

BY COLONEL BALCK.

(A translation of a series of articles appearing in the  
*Militar-Wochenblatt*, July 1909.)

*Communicated by the Imperial General Staff.*

The Japanese Army began the war of 1904 with insufficient training for night operations, and with an outspoken aversion to fighting in the dark. The force of circumstances, however, was stronger than preconceived prejudice.\*

According to a Japanese compilation, issued to the army and containing information concerning the Russians, the latter were believed to be addicted to night operations followed by an attack delivered at dawn. Soon after General Kuropatkin assumed the command, he issued certain tactical instructions in which, though the night attack on Kars was referred to, not a word was said as to the advisability of night attacks in the field. Some months later, at the end of August, he issued further instructions (with a view to communicating the tactical lessons of the campaign to the whole of the Russian forces) in which he remarked, "The Japanese appear to avoid night fighting, notwithstanding General Oku's night attack at Ta-shih-ch'iao, and the attack on dismounted cossacks at dawn by two Japanese battalions during the fighting at Hai-chou." Here he quite rightly recognised a modification in the tactical views of the Japanese; and then went on himself to inculcate night operations.

The battle of Ta-shih-ch'iao, on the 24th July 1904, first demonstrated the ballistic superiority of the Russian guns fighting in covered positions; a superiority which became still more palpable as time went on, and the number of Russian guns in the field increased. It was owing to the indecisive result of the first day's fighting that the commander of the 5th Japanese Division decided to deliver a night attack; but as his advance was deferred until the early hours of the morning, the Russian position was found already evacuated.

The 1st Japanese Army utilised the pause in the operations around Feng-huang-cheng, and again on the Lan Ho in July, to study the characteristics of the mountainous country through which

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\* Such is the only possible explanation of the time wasted by the Japanese before the Nan Shan position, between the 20th—26th May 1904. Their first attempt to take Chin Chow with 4 battalions during the night of the 25th-26th May was scarcely encouraging, and led ultimately to a costly frontal attack on the Russian position.

they would have to advance on Liao-yang; and apparently the opportunity was also taken for training the troops in night operations.

The advance on Yu-shu-Ling and Ta-wan (31st July) was made by night, the attack being delivered at dawn. During the fighting around Liao-yang, not only the advance and deployment, but the whole attack used to be carried out under cover of darkness. The hoped for reduction in the number of casualties showed a falling off in the later engagements as the Russians also became accustomed to night fighting.

## I.

During the second half of August, Kuropatkin had pushed out strong forces to the south and south-east of Liao-yang. The 3rd Siberian Army Corps was on the right, and the 10th Army Corps on the left (total 96,000 men and 298 guns), on a frontage of some 20 miles; the left of the line resting on the Tai-tzu Ho. In rear of these two Army Corps, but separated from them by the swollen Tang Ho, was the 17th Army Corps.

The 9th Infantry Division\* was on the line extending from "height 300"† to the road over the An-ping-Ling Pass. To the right of the height mentioned, in touch with the 17th Corps, there were ten battalions (of the 33rd, 34th and 35th Regiments); while to the left of it, in touch with General Orbeliani, there were five battalions. Details of the occupation of the Russian position are not known, but strong reserves were presumably in the secondary (supporting) position.

The Japanese 1st Army, which was numerically inferior to the Russian force just referred to, had halted during the latter half of August, on the Lan Ho, some six miles away from the Russian line. Their information concerning the enemy was very accurate: orders found on a dead officer of the Russian General Staff had disclosed the anxiety felt at the Russian Head-quarters, as to their right flank, and the danger of their being compelled to evacuate Liao-yang by a turning movement in that direction. As early as the 22nd August, General Kuroki issued his orders for an attack to be carried out on the 26th, so that there was ample time for a thorough study of the ground. During the night of 25th-26th, there was a full moon.

The Russian advanced position lay on a wild rugged ridge, some 985 feet above the level of the valley below. The difficulties of ground were greatest in front of the Russian 17th Corps; General Kuroki, therefore, decided to establish his Guards Division there, on the 25th August, and thus threaten the Russian right flank; while

\* Belonging to the X Army Corps, and consisting of the 33rd, 34th, 35th and 36th Infantry Regiments.

† i.e., *Sajens* = 640 metres = 2,100 ft.

his 2nd Division was to attack, "before dawn," the section lying between the Kung-chang-Ling—Tzu-kou road and "height 2,100." On his right, the 12th Division was to advance at daybreak. As the Guards Division had the hardest task before it, an artillery brigade and two squadrons of the 2nd Division were attached to it: the latter division being reinforced by a mountain battery of the 12th Division. (See sketch map I.)

It was a drawback that all three divisions should have to fight in widely separated areas, but the best had to be made of the situation. The time available before the attack was to commence was utilised for reconnaissance of the ground and approaches. Every night, small parties pushed forward to the Russian outpost line (which was holding the pass about a mile and a half in front of the position) in order to disturb the outposts. This procedure had the advantage of making the men acquainted with the ground, while the Russian outposts began to pay less and less attention to these small operations.

On the 25th, the Guards Division advanced and established itself within striking distance of the section of the Russian position allotted to it. The attention of the Russians was thus especially directed in that direction.

The following account deals only with the 2nd Division, detailed to break through the Russian position. Until the afternoon of the 25th August, the 2nd Division remained under cover of the outposts, which were some  $2\frac{1}{2}$ —3 miles away from the Russian outpost line, in the valley of the Lan Ho.

According to the divisional orders, the dispositions of the troops at 4 P.M. on the 25th was as follows:—

*On the left—at Wu-chia-ling:*

3rd Infantry Brigade (Major-General Matsunaga):

4th and 29th Infantry Regiments.

1 Troop Cavalry.

5th Mountain Battery.

1 Field Company Engineers.

$\frac{1}{2}$  a Bearer Company.

*On the right—at Hsi-huang-ni-kou:*

15th Infantry Brigade (Major-General Okasaki):

16th Infantry Regiment.

2nd Battalion 30th Infantry Regiment.

1 Troop Cavalry.

1st Battalion \* of 2nd Artillery Regiment.

2nd and 3rd Field Companies Engineers.

$\frac{1}{2}$  a Bearer Company.

After sunset, the right column was to advance to Ho-chia-pu-tzu, and the left column to Weng-chia-pu-tzu. From those places, both columns were to advance in such a way as to be ready to attack between 3 and 4 A.M.; the right column being

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\* The Japanese battalion of field artillery corresponds to our brigade.

directed upon the heights S.-E. of Tzu-kou Pass; and the left column upon the heights N. of Hsia-hsi-kou. The attack was to be begun at 4-30 A.M. The outposts, as soon as the columns had passed through them, were to concentrate and form a reserve at Wu-chia-ling, where the artillery, engineers, and bearer company of the left column were to remain in the first instance. Divisional Headquarters were also to be at Wu-chia-ling, in telephonic communication with both of the brigades. The men were in light marching order, some of the battalions wearing rolled great-coats in addition. A white band was worn on the left forearm, as a distinguishing mark.

The right column, moving on Ho-chia-pu-tzu, first pushed forward the 6th Company 30th Regiment on the right, on the northern slope of the valley, and half an hour later the 5th Company, on the southern side of the valley with orders to drive in the Russian outposts. The 5th Company only met with a feeble resistance, which was overcome. Half an hour later, the 5th and 6th Companies of the 6th Regiment drove back a Russian company on outpost duty at Ho-chia-pu-tzu without firing a shot. The 6th Company of the 30th Regiment seems to have been delayed by the impossible state of the ground, and to have reached its position only about the same time as the two companies of the 16th Regiment just mentioned. So far the operations had been very similar to those of the preceding nights. Half an hour later (11-30 P.M.) the remainder of the infantry of the column followed, reaching the heights south-east of Ho-chia-pu-tzu at 12-30 A.M.

The left column (for some unknown reason) had sent off the 5th Company of the 29th Regiment to the south-west, in order to keep touch with the Guards Division, some 12 miles away. The remainder of the 2nd Battalion 29th Regiment was ordered to advance (with companies opened out) and drive in a Russian outpost on height 260. By midnight, after a brief fight, that height was occupied, and the brigade (marching with the 4th Regiment on the right and the 29th Regiment on the left) reached Weng-chia-pu-tzu at 1 A.M.

Both brigades were thus only about 2 miles from the Russian lines, whereas they were, themselves, 3 miles apart.

As soon as the left column had reported its arrival at Wang-chia-pu-tzu by telephone, the divisional reserve marched off in that direction.

The plan of the attack was to advance without firing a shot; only two companies on the right (7th and 8th of the 16th Regiment), moving along the road leading up to the pass, were to open fire in order to attract the enemy's attention to that flank; while the left column advanced from Hsia-hsi-kou against the centre of the position, on the heights some 1,600 yards north of that place. The artillery was on the right, and the mountain battery was brought up into position to the west of height 260. The heights to be stormed were about 660 feet above the level of the valley, and the Japanese

therefore had the advantage, as they climbed the slopes, of being invisible to the enemy.

By 3 A.M. the brigade on the left, moving in three columns \* round the western end of height 260, had reached the point from which the attack was to be commenced. It was still connected by telephone with the divisional head-quarters. Soon after this, the two companies detailed to make a demonstration came into action on the extreme right, and the Russians replied by opening fire all along the line. As there could no longer be any question of a surprise, the divisional commander ordered, by telephone, an immediate attack. The brigade on the left, owing to its position, would be the first to reach the enemy's line.

From where the brigade stood, two ravines ran up to the Russian position. The 1st and 3rd Battalions of the 4th Regiment † were on the right, each with 3 companies in front line and one company in rear of the centre. On the left, the 29th Regiment advanced with 9 companies in front and 2 companies in second line. The companies were in column of fours (or column of sections) at deploying distance, with only a few skirmishers out in front. The difficulties of this movement across country, combined with climbing a steep height covered with loose stones, must be fully recognised, and it was only natural that the direction should be lost. The right wing of the 29th Regiment (which had the fewest difficulties to contend with) was the first to come in contact with the enemy. It was not seen until it was within 15—20 yards of the position, which it promptly stormed. The left wing of the regiment came up later, was received with the fire of the defenders at longer range, and had to content itself with taking up a position close to the enemy's line.

The 4th Regiment was also subjected to fire at considerable range and met with obstinate resistance; the brigade reserve, however, was promptly brought up, and the regiment successfully forced its way into the position.

The advantage of the demonstration on the right was unmistakable, as the Russians had moved their main body towards their left, to the road over the pass. Several hours passed before the Russian reserves could come into action again at the actual point attacked. The effect of that demonstration, too, must naturally have facilitated the advance of the 15th Brigade, astride of the road leading up to the pass. The 1st and 3rd Battalions of the 16th Regiment advanced to the north of the bridge, with 8 companies in the front line, with two companies (5th and 6th) of the 2nd Battalion in second line, in rear of the left wing. To the south of the ridge marched the 2nd Battalion 30th Regiment as brigade reserve. The assault was successfully carried out without firing a shot, and the 2nd Battalion 30th Regiment got into touch with the 3rd Brigade.

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\* *Viz.:*—

*Right:* 7 companies of 4th Regiment.

*Centre:* 6 companies of 4th and 29th Regiments.

*Left:* 7 companies of 29th Regiment.

† The 2nd Battalion remained as brigade reserve, at Sha-shi Ko.



The ensuing movements hardly come under the head of "night operations." The Russian position was seized at daybreak, with small loss—though the reserves were not strong enough to be able to convert the result into a really serious defeat for the Russians. Including the casualties of the 26th August, the 15th Brigade lost about 200 men and the 3rd brigade lost 29 officers and 492 men.

Meanwhile the 12th Division had also started, and captured the advanced position of the Russians under cover of darkness, but was unable to push its attack any further. The three Russian army corps, of which only parts had been actually engaged, failed to take the opportunity of achieving a success, and during the night of the 26th and 27th, fell back across the Tang Ho.

This advance of the Japanese 2nd Division, along goat tracks and across country, may be taken as a model. The careful reconnaissance and timely occupation of the ground which had to be traversed (thus eliminating all chance of surprise), the ample time allowed for all movements, and the use of the telephone, are all worthy of special attention. But owing to the fact that the Russian outposts were driven in only a few hours before the attack, the advantages of a surprise were lost. As there was ample time available, it would have been better if the Russian outposts had been driven in during the previous night. The plan of attack was based upon the assumption that the enemy would move his reserves in the direction of the first alarm only. The two companies of the 16th Regiment on the extreme right were the first to open fire; when that had produced the desired result, the 3rd Brigade advanced on the left; and finally the right wing delivered its attack.

## II.

The Russians had failed to utilise the opportunity of attacking three Japanese divisions, with their three army corps in the neighbourhood of An-ping. Their retirement across the Tang Ho was but the first step towards falling back to the Liao-yang positions.

On the 30th August the Japanese advanced with their 2nd Army astride of the railway, their 4th Army on its right, and the 1st Army on the extreme right flank. The fighting now assumed the character of position warfare, which invites night operations to a very special degree. The attacker knows the ground and the enemy's dispositions; the difficulty of bringing up the troops is reduced, and the attack under cover of darkness is mostly a continuation and completion of the previous day's engagement. The meagre effect of fire upon men lying down, more than once led to mistakes as to the amount of success achieved, and to premature assaults which suffered heavily from fire as soon as the men rose. Naturally the troops soon began to avoid such premature assaults, and preferred to wait for darkness before they went forward. Such attacks on a small scale

were due to the initiative of the leaders on the spot. The difficulty is to ensure unity of action in the case of large masses, especially where there are no fresh troops available. This was apparently the reason for the failure of the attacks of the 5th Brigade and 6th Division, during the night of the 30th-31st August 1904.\*

Other considerations which led to the development of night attacks were: the difficulty of dealing (by day) with the obstacles so freely used by the Russians, the comparatively small number of the Russian machine guns, and the total absence of search-lights in the field. The presence of the latter at Port Arthur had a very marked effect in limiting the use made of night attacks there.

During the night of the 30th-31st August, the right wing of the 1st Japanese Army (*i.e.*, the 12th Division and the 15th Infantry Brigade of the 2nd Division) crossed the Tai-tzu Ho and advanced on the section of the Russian position held by the 35th Infantry Division, *viz.*, the height S.-W. of Hsi-kuan-tun, the eastern edge of the village, and the Manju Yama ridge.†

The latter was occupied by the (Russian) 137th Infantry Regiment, with four batteries in a covered position sufficiently retired behind the ridge for the flashes to be invisible except when it was dark. The *right* of the 137th Regiment was in touch with the 10th Infantry Regiment holding the village Hsi-kuan-tun, and its left with eleven companies of the 140th Regiment occupying a small height. (See sketch map II.)

On the Japanese right their 15th Infantry Brigade supported by nine batteries (which, however, could make no impression upon the well concealed Russian guns) had worked its way, secured by the 23rd Infantry Brigade, to within about 650 yards of the enemy's line, when twilight fell. The whole ground was covered with millet some ten feet high, so that it was uncommonly difficult to find the way or see one's whereabouts. About 7 P.M. the Japanese artillery began to shell the Manju Yama height, and after this bombardment had continued for an hour, the infantry once more advanced, about 8 P.M.

Apparently, the 30th Regiment was on the right, with its three battalions abreast, followed by the 1st Battalion of the 4th Regiment (which had been brought up); on the left were two battalions of the 16th Regiment, followed by the 3rd Battalion in rear of the right wing. Each battalion had one company extended in front line, while the three other companies moved abreast in column of route. The direction was maintained by compass. The difficulties of the ground were very great, especially on the left, where the 16th Regiment was, and where the Brigade Commander

\* *Vide Kriegsschichtliche Einzelschriften*, Heft 43-44.

The attack delivered by the 5th Brigade was contrary to all accepted views as to night fighting. Out of 6 battalions only 4 companies were actually engaged.

In the attack of the 6th Division the unexpected explosion of a Russian mine caused a panic; while on the other flank, Japanese cheers brought the Russian reserves to the point selected for assault.

† *Vide Kriegsschichtliche Einzelschriften*, 43-44, p. 61, sketch map B.

took up his position. There could be no question of a surprise, as the Russians maintained a constant fire, at random, into the darkness. General Okasaki therefore issued orders for a halt to be made until the moon should rise over the Manju Yama ridge. Apparently, a gap had opened between the two regiments, into which the general now sent the 1st Battalion 4th Regiment.

On the Russian side, the officer commanding the 137th Regiment proceeded to the head-quarters of the 35th Infantry Division (in Hsi-kuan-tun) to report on the situation: twenty officers out of 46 were already *hors de combat*.

At 10 P.M. the moon rose, and the Japanese 30th Regiment at once advanced. The fire of the Russians was quite ineffective and the Japanese succeeded in storming the northern portion of the enemy's position. On the left, the 16th Regiment had lost its proper direction, had seized Hsi-kuan-tun with its left wing, and (without knowing anything about the success of the neighbouring regiment next to it) occupied the southern portion of the heights. The 1st Battalion 4th Regiment was also there.

The Russian reserves (5 companies of the 140th Infantry Regiment) had marched in the direction of the cheering heard from the 30th (Japanese) Regiment; but they were too late and their counter-attacks were repulsed. The Russian and Japanese lines were some 150 to 200 yards apart, both keeping up a heavy fire, until the Japanese commander sounded the "cease fire," seeing that the only result was to betray the exact position of the troops to the enemy. General Okasaki ordered the position to be strengthened, in anticipation of a Russian counter-attack. Patrols ascertained that the farm buildings in front were occupied, but that opposite the left flank, the Russian infantry had evacuated the heights west of Hsi-kuan-tun. These heights were at once occupied by three companies of the 1st Battalion 4th Regiment. By dawn, notwithstanding the stony ground, deep shelter trenches had been constructed all along the line. General Okasaki issued the following orders: "Battalions will establish suitable observation posts; the troops will make as much cover as possible against the hostile artillery fire which is certainly to be expected, and will rest, and sleep. Hostile infantry will certainly attack us; as soon as they come to close quarters their artillery will have to cease fire; the trenches will then be occupied for the delivery of heavy fire, after which we will deliver a counter-attack. That will mean victory."

It was not long before the Russian artillery opened fire upon the ridge: at first with 72 guns, reinforced in the afternoon by another 48 guns. But as the Japanese infantry had obtained good cover in the trenches the losses were very small. A Russian attack, delivered in insufficient strength and with inadequate mutual co-operation, was easily repulsed. A night attack by the Russians might have been very effective, as by that time the General Officer Commanding X Army Corps had 33 battalions at his disposal. The Manju Yama ridge, however, was only attacked

by parts of the available Russian force, and even so little cohesion or unity of purpose was displayed; while 9 battalions of the X Army Corps remained behind in a secondary position. The only result achieved was the recapture of Hsi-kuan-tun. The repulse of this Russian attack is of little or no interest, apart from the use made of hand grenades by the Russians. Some battalions went into action singing, and with the band playing. By 2 A.M. four attacks by the Russians had been repulsed, but as they appeared to be forming at the foot of the heights for a renewed general attack, the Japanese 30th Regiment delivered a successful counter-attack against their left flank, whereupon they fell back. Meanwhile the 29th Regiment had come up.

The Japanese brigade had marched and fought, day and night, for three days. Considering the kind of fighting the casualties were not heavy. Between the afternoon of the 31st August and 11 A.M. on the 2nd September the brigade had lost 1,048 men.

### III.

After the battle of Liao-yang, there was a pause in the operations. The Japanese halted some 12 miles beyond Liao-yang, while the Russians fell back on Mukden. At the beginning of October, the Russian force advanced as follows: the "Western force" (composed of the 17th, 6th, and  $\frac{3}{4}$  of the 10th Army Corps) under General Bilderling, astride of the main Mukden—Liao-yang road; the "Central force" (composed of the remaining quarter of the 10th Corps, and the 4th Siberian Corps) under Lieutenant-General Zarubaer; and, on the left flank, the "Eastern force" (consisting of the 1st, 2nd and 3rd Siberian Corps) under General Stackelberg. The latter was intended to turn the Japanese right.

The Japanese had their 1st, 4th and 2nd Armies facing the enemy.

By the 10th October, their 2nd Army (5th Infantry Division) had succeeded in driving the 3 $\frac{1}{2}$  Russian divisions of the "Eastern force" (which had reached the Shih-li Ho) back across the Sha Ho. On the 10th October, the "Central" Russian force was compelled to fall back from the Shih-li Ho, while the "Eastern" force was engaged (not without success) with the 1st Japanese Army, in the mountains. The effect of the repulse of the Russian centre soon made itself felt in the neighbouring "Eastern" force.

During the night of the 10th-11th October, the Japanese\* attacked the Russian advanced troops (partly under cover of

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*i.e. 1st Army consisting of	...	...	{	Guards Divn.
			{	2nd "
			{	10th "
4th "	"	...	{	5th "
			{	Reserve "
2nd "	"	...	{	3rd "
			{	6th "

The 4th Division was on the extreme left (on the right bank of the Sha Ho).

darkness) and drove them back to the advanced guard positions, some 2 miles in advance of the main Russian line. Fighting had continued the whole of the previous day, without any decisive result. Premature attempts to assault, on the part of the Japanese, had been repulsed by the Russian fire. After a short pause, the engagement was renewed all along the line under cover of darkness. With the Guards, the 3rd Guards Regiment repeatedly attacked Watanabe Hill, but it was not until 5-30 A.M. that the height was finally seized. The 2nd Division attacked San-cheng-tzu-Shan at 7 P.M., occupied it at 1 A.M., and then pushed further forward under cover of darkness. The 15th Infantry Brigade surprised a Russian force (under General Mau) at 3-30 A.M., and drove it back northwards. Further towards the left, there was the great night attack of the 10th Infantry Division supported by two Reserve Brigades, which will be referred to in detail further on.

On the 12th October, the Russian 10th Army Corps fell back to its main position, while the 17th Army Corps was still fighting to retain its hold on its advanced guard position. On that day, the offensive movement of the Russians came to a standstill; thenceforward they fought merely with a view to extricating their scattered forces, and securing their retreat. The fighting died away in the early hours of the morning; human nature could do no more.

On the 14th October, at 3, 5 and 5-30 A.M., the 3rd Japanese Division attacked the centre of the 10th Russian Army Corps, and finally succeeded in breaking through and capturing some Russian guns (of the 9th Artillery Brigade), about half a mile in rear of the front.

The 15th was utilised by the Japanese in reforming their units, and strengthening their hold on the ground which had been won. Their power of offensive action was almost exhausted when (on the evening of the 15th) Kuropatkin ordered an attack, without, however, giving definite orders as to its commencement.

But news of the capture by the Japanese of the heights which afterwards came to be known by the names of Putilov and Novgorod Hills, checked the wish of the Russian leaders to attack. On the 16th feeble attempts were made to retake the heights, and it was not till the following night (16th-17th) that both hills were re-occupied after a hot hand-to-hand struggle. But all idea of a Russian offensive movement had been forgotten by this time, and the Russians contented themselves with repulsing a Japanese attack (made by the Guards Reserve Brigade) on the two heights during the night of the 17th-18th.

The fighting came to an end owing to the exhaustion of both sides. The Russians still held their first position and proceeded to fortify it. The Japanese withdrew their advanced troops out of range of the Russian artillery, and also strengthened their position with the spade.

## IV.

*The Japanese attack upon San-kuai-shih-Shan.*—On the 11th October, the Russian 15th Infantry Brigade had occupied "Temple Hill" (Tera Yama), and General Oyama received the impression that there was a gap in the Russian position in front of his own 10th Infantry Division, and that there were only some weak detachments between the left flank of the Russian 10th Army Corps and the centre of their position. He therefore decided to break through their line at that point with his 10th Division and two brigades from his reserve, while the 1st and 2nd Armies were to support the attack.

General Kuropatkin had observed the fighting on the "Temple Hill," and as General Mau's detachment fell back from that point in a northerly direction, thereby leaving a gap some five miles wide, he ordered the 1st Brigade 37th \* Division (which was close to where he stood, at Tung-shan-pu) to occupy the "two-peaked hill" (i.e., the village of San-kuai-shih) and Nan Shan to the east of it. The 2nd Brigade (37th Division) moved to Tung-shan-pu, while the remainder of the 1st Army Corps † advanced to Tuan-shan-ssu. To the right, between the 1st Army Corps and the 10th Army Corps, there was still a gap of  $2\frac{1}{2}$  miles, which was inadequately closed by the occupation of a Chinese camp (by two battalions of the 34th Infantry Regiment) on the Shih-li Ho. During the night two more battalions of the same regiment were moved (by the 10th Army Corps) to Ta-kow.

The 1st Brigade occupied San-kuai-shih Shan, the village, and a knoll to the eastward with the 145th Regiment on a frontage of 1,300 yards, while the 146th Regiment occupied Nan Shan and connected with General Mau's force on the left. The remainder of the 37th Division was some  $2\frac{1}{2}$  miles away. Apparently, each regiment had a battery attached to it.

On the left of the 145th Regiment (*vide* Sketch Map III) the 13th and 14th companies had fired upon hostile infantry, during the course of the afternoon, but with this exception the regiment only suffered from artillery fire. As darkness came on, shelter trenches were constructed. There was no connection maintained with neighbouring units, and it was only in the course of the night that it was ascertained that General Mau's force and the 146th Regiment had fallen back, for some unknown reason, in a northerly direction. In Ta-pu, also, only a picket (sent there from the Chinese camp) was left. The 147th Regiment alone (with its main body at Tsan-kian-tun) was behind the regiment thus entirely isolated. It was known

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\* 37th Division of 1st Army Corps -

1st Bde.	...	...	...	{ 145th Regt.
				{ 146th "
2nd Bde.	...	...	...	{ 147th Regt.
				{ 148th "
† 1st A. C.	...	...	...	{ 22nd Infy. Divn.
				{ 37th " "

that strong columns of hostile infantry had moved into the Shih-li Ho valley from the west ; but the reconnaissance in the direction of the enemy was very inadequate. The Russian regiment had ten companies in front line, with only weak outposts in front of the line of defence. The San-kuai-shih Shan height rose nearly 100 feet above the level plain, with two steep kopjes ; on the saddle between them there was a Chinese temple. The village lying to the east of this height consisted of six or seven homesteads surrounded by a mud wall about the height of a man.

During the afternoon, the artillery of the Japanese 10th Division shelled the height. As soon as the orders for the attack were received from Army head-quarters, the Divisional Commander assembled officers commanding units on the height to the south-west of Ta-pu, and pointed out to them the difficulties of a night attack on such a large scale, especially with but little moonlight.\* The attacking force was to advance with six battalions in single rank, in front line, in such a way that the right flank was to be directed on the Nan Shan height, while the left flank was to advance on San-kuai-shih Shan. Nothing was known as to the enemy's strength or dispositions. The battalions in front line were to select, in the course of the afternoon, any available objects (such as trees, Chinese sepulchres, etc.,) for maintaining their direction. Patrols were also to be sent out to the front to lay down stones, branches, etc., to mark the direction.

There were 23 battalions available, and of these six were to be in the front line, eight in the second, and nine in the third. The Brigade Commanders were to exercise command over both first and second lines (*i.e.*, the force was organised by wings). The third line, in the vicinity of Ta-pu, was to form the divisional reserve.

The first line was to advance in single rank, without intervals between files. The battalions in second line were to move in line of company columns,† some 40—50 yards in rear ; and those of the third line were to follow in columns of half battalions,‡ at a distance of 100—150 yards. Patrols were to be pushed out 50 yards in advance of the first line ; while single men (with white flags) preceded the flanks of battalions in second line, with a view to maintaining connection.

In the evening, the men of the division doffed the khaki cloak worn on cold days over their dark cloth uniform, and put on their dark cloaks. White bands were worn on the left forearm, for purposes of identification. At 11 P.M. a hot meal was issued, after which the battalions of the first line proceeded to take up their allotted positions.

The signal for the advance to begin was given at 1 A.M. by lighting a bonfire at Divisional head-quarters on the height near Ta-pu. The first line advanced, the patrols in front going forward

\* (Bel fehlendem mondlicht). . . . or in the absence of moonlight. (Itd.) H. H. D.

† Breitkolonne.

‡ Doppelkolonne.

from one to another of the points arranged for maintaining direction. They were told to lie down as soon as they fell in with the enemy, and to send back a report; but under no circumstances were they to open fire.

The attack was to be carried through with the bayonet; the first line was only to fire if absolutely compelled to do so. Repeated short halts were made in order to restore order.

By 3 A.M., the left flank had arrived within about 300 yards of the enemy's position. A few advanced posts were driven in, and the Russians soon afterwards opened a heavy fire; but as is nearly always the case in night fighting, their shots were too high and fell in large numbers to the west of Ta-pu, where the Army and Divisional head-quarters were. Part of the Japanese line continued to advance, notwithstanding the Russian fire, while part of the men threw themselves down on the ground and crept onwards. Apparently, the second line carried the first line forward.

It was only at certain isolated points (especially at the village of San-kuai Shih) that portions of the fighting line came to a standstill about 100 yards from the enemy and began to fire.

The extreme right flank, directed on Nan Shan, found\* no enemy in front of it, and wheeled inwards to its left, thus compelling the Russian troops in San-kuai-shih to evacuate the village, although street fighting did not entirely cease till 4-30 A.M., when some two-thirds of the Japanese division were engaged around the place. The hand-to-hand fighting was also very severe on the San-kuai-shih Shan height.

On the left, the attacking troops (and presumably the reserve also) advanced along the road leading northward from Ta-pu, and came upon an unlimbered Russian battery, which however managed to escape in the confusion. There seems to have been something like a panic for a short while on this left flank, for the sound of galloping horses as the battery retired was mistaken for cavalry charging. Wild confusion reigned in the captured position, and the thick morning mist made it especially difficult to remedy.

The losses of the Russian regiment were not exceptionally heavy except in the village; there were about 200 killed, and 200 prisoners. But worse than any amount of casualties was the moral effect produced upon the Russian regiment, which had only recently arrived in the theatre of war; the men would not regain confidence for a long time to come.

The Japanese casualties amounted to some 1,000 men.

The 10th Division continued their attack on the following day (12th); and during that night the 11th Reserve Brigade delivered a night attack, which was, however, repulsed—details are not available.

The decision to attack by night cannot fail to be approved. The strength of the force engaged was justified by the strength

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\* See article by Colonel W.D. Bird in the *Journal* for October 1910, p 476 (Editor's note).



of the enemy present on the previous evening. It was impossible to assume that part of the defending force would fall back without orders as soon as darkness came on. Night operations are liable to all sorts of unforeseen accidents, and the employment of a larger force than might otherwise be necessary is desirable. The reconnaissance was not very thorough, and the result was that the Japanese right delivered its stroke in the air, and then had to wheel inwards, against the enemy's flank and rear. Had the 2nd Brigade of the (Russian) 37th Division delivered a counter-attack here, the results might have been serious. The technical preparations for the advance were excellent, though the formation adopted did not comply with the conditions necessary for night fighting. The units reached the enemy's position in such a helpless, disorganised mass that success was far from being assured, and indeed the danger of panic was very real. The command was organised by wings; it is unfortunate that no European officer was present at this action.

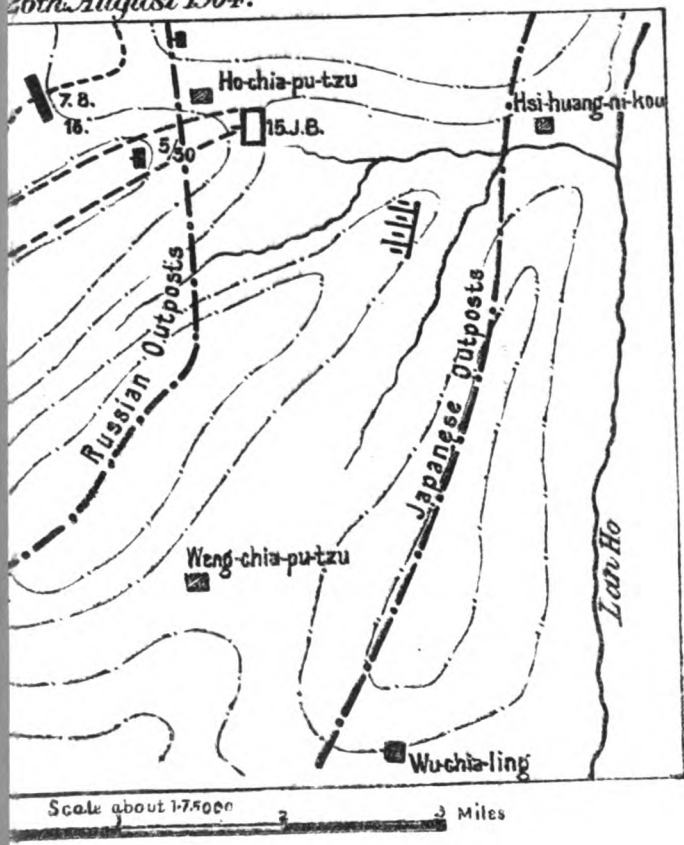
The lines were too close together, and could only be used for a direct forward movement. If the second line had been kept considerably further back, it certainly might have suffered from the high firing of the Russians, but it would still have been available.

A much more suitable formation was used by the Guards Division on the 11th October, in the battle on the Sha Ho. The division advanced in two columns, side by side. Of the column on the left (2nd Guards Brigade, under General Watanabe), one battalion each of the 3rd and 4th Guards Regiments were in rear as a reserve. The regiments advanced abreast, in the formation shown in the following diagram:—

E 2<sup>nd</sup>  
26th



E 2<sup>ND</sup> JAPANESE DIVISION  
 26th August 1904. *Sketch Map I.*



No. I.

of the enemy present on the previous evening. It was impossible to assume that part of the defending force would fall back without orders as soon as darkness came on. Night operations are liable to all sorts of unforeseen accidents, and the employment of a larger force than might otherwise be necessary is desirable. The reconnaissance was not very thorough, and the result was that the Japanese right delivered its stroke in the air, and then had to wheel inwards, against the enemy's flank and rear. Had the 2nd Brigade of the (Russian) 37th Division delivered a counter-attack here, the results might have been serious. The technical preparations for the advance were excellent, though the formation adopted did not comply with the conditions necessary for night fighting. The units reached the enemy's position in such a helpless, disorganised mass that success was far from being assured, and indeed the danger of panic was very real. The command was organised by wings; it is unfortunate that no European officer was present at this action.

The lines were too close together, and could only be used for a direct forward movement. If the second line had been kept considerably further back, it certainly might have suffered from the high firing of the Russians, but it would still have been available.

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etch Map I.

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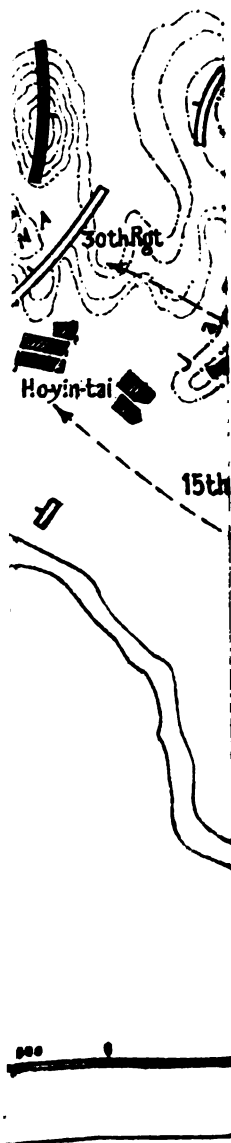
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THE ATTACK  
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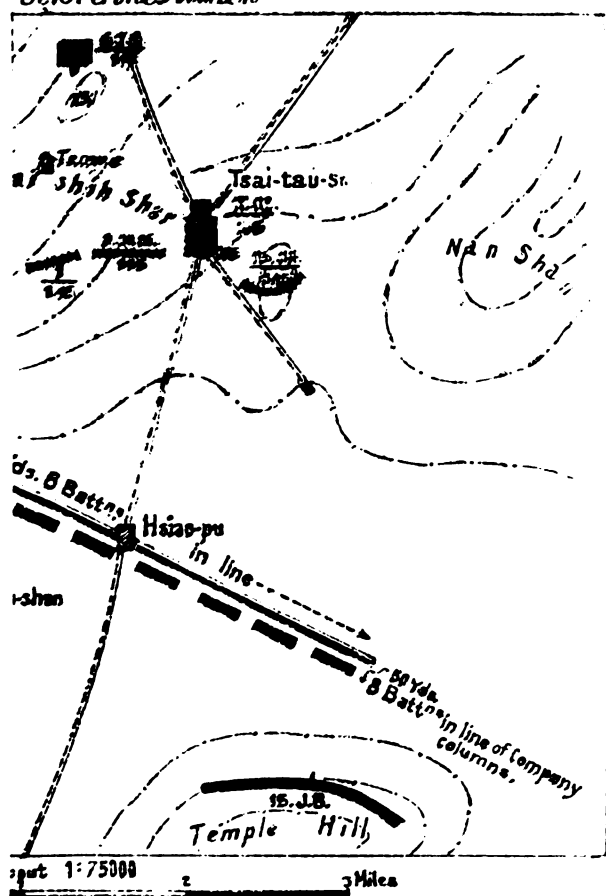
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# *Sketch Map III*

OF THE 10<sup>TH</sup> DIVISION  
*before the Attack*



No. 12.

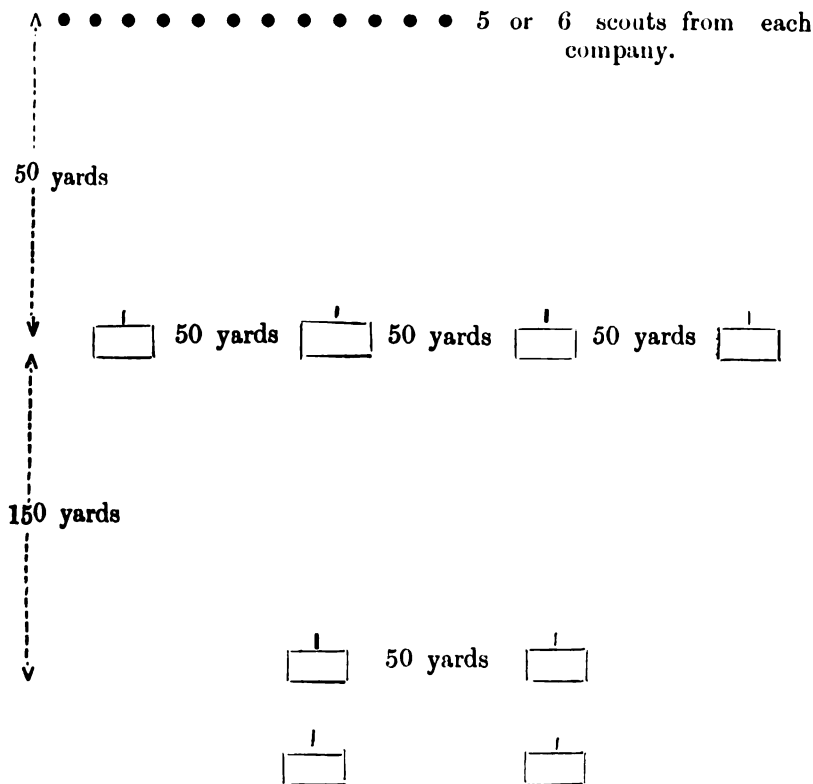






## DIAGRAM

Attack of the left half of the 2nd Guards Brigade, on the 11th October 1904.



Bayonets were fixed and rifles loaded; but not a shot was to be fired until the enemy could be clearly recognised. At 3 A.M. everything was ready. The general was with the 4th Regiment, while his Staff Officer\* accompanied the 3rd Regiment. As it was impossible to issue bands for the arm, it was notified in orders that "As the Japanese are small of stature, and no foreign military attachés are present with the brigade, all big men are to be considered as enemies." The 4th Guards Regiment was fired upon, at about 50 yards, by Russian advanced posts which at once ran back to their defensive position. The patrols at once lay down; the leading battalion deployed into line (2 ranks), while the second battalion formed line of company columns at deploying interval. As the advance proceeded fresh patrols were sent forward who

\* Brigade-Adjutant (Brigade-Major.)

ascertained the enemy's position to be some 200 yards away. When day began to break and the Russian line became clearly visible, the first line opened fire. The left flank battalion of the 3rd Guards Regiment endeavoured to turn the enemy's right. After half an hour's firing, the enemy (estimated at one battalion) was driven back.

In subsequent night operations the following formation was adopted as typical. The first line was composed of a line of company columns, preceded by one section from each company, with pioneers, at a distance of 50 yards. The battalion reserve followed at a distance of 100 to 200 yards. The second line would be some 200 yards in rear of the centre, or to a flank. Communication was maintained by connecting files.

## V.

On the Japanese left, the fighting of their 3rd and 6th Divisions against the Russian 3rd Division in the deep-cut bed of the Shih-li Ho was of a very different description. About 2 miles in rear of the Russian force there was a second fortified position held by their 35th Division.

The 4th Japanese Division on the left flank of the 2nd Army, endeavoured to turn the Russian right, while both the other divisions had come to a standstill some 2,700 yards from the Russian position, which was in the Shih-li Ho valley with advanced posts in the neighbourhood of Wu-li-tai-tzu.

On the 11th, at 6 A.M., the 3rd Division had advanced along both sides of the railway, on Shih-li Ho—Yin-te-nin-lu, while the 6th Division was directed against the western side of the village and Yang chia-wan. The 5th Infantry Brigade (6th and 33rd Regiments) remained in reserve at the disposal of Army head-quarters. By the evening of that day, the 6th Division had succeeded in capturing the Russian advanced position at Wu-li-tai-tzu, and had pushed on to within 2,200 yards of the village of Shih-li Ho, while the 3rd Division on the left occupied Yin-te-nin-lu the same evening. There seems to have been something wanting in the measures taken for security; at all events the Japanese were surprised and driven out of the last named village again—a proof of the necessity for such precautions in night operations.

The Russian force, which delivered this counter-attack, was composed of the 2nd Brigade, 35th Infantry Division (*i.e.*, the 139th Regiment, two battalions of the 140th Regiment, with the 2nd Battery of the 35th Artillery Brigade), which had been left about a mile and a half in rear of the village. At 8 P.M. this force reached Lung-wang-miao, where one battalion of each of the two regiments\* remained. Both regiments then continued their advance with four battalions in double column of sections at 30 paces interval, the

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\* *Viz.*, 1st Battalion 139th Regiment and 2nd Battalion 140th Regiment.

"scout detachment"\* being on the left.† The battalions on the flanks were directed against the eastern and western exits of the village‡ respectively, while the "scout" party was intended to work round and attack from the rear, where a hostile battery was believed to be in position. An account of the action, which appeared in the Russian "Manchurian Army Journal," states that all firing was forbidden, knapsacks were left behind, and great-coats were worn. The advance was begun at 10 P.M. Though there was heavy firing all along the front of the 3rd division, it was too high to do any damage to the advancing force, while it covered all sounds of the advance. The river Shih-li Ho, which runs along the north front of the village, checked the advance for a short while. The 4th company of 145th regiment was the first to cross, and after re-forming, it made a dash for the village, followed by the rest of the 139th and 140th regiments. The "scout" party lost its way in the darkness, and closed on the left flank of the 1st 140th regiment.

Not a shot was fired, and the Japanese were taken entirely by surprise. The majority were unable even to stand to their arms. After a sharp hand-to-hand fight, they were driven out of the village, leaving 1,000 dead and even a larger number of rifles behind them. The village was then put in a state of defence and occupied by the 139th regiment, while the rest of the force, together with a battalion of the 10th regiment (of the 3rd Division) which had joined it in the dark, took up a flanking position to support the defence of the place; it was held till the afternoon of the 12th, when its evacuation was ordered. The Russian losses are given as 12 officers killed, and 476 men killed, wounded and missing.

I am not aware of any Japanese account of this unfortunate occurrence, or of their repulse on the "Putilov Hill," which must therefore be passed over for the present.

The advance of the 2nd and 3rd battalions of the Japanese 45th regiment, from Yang-chia-wan over the bare plain against Ehr-shih-chia-tzu (where the enemy's right flank was supposed to rest) is very characteristic.

The 1st battalion had to work its way forward in the valley of the Sha Ho, so as to be able to bring a flanking fire to bear. Further to the right the 2nd battalion 23rd regiment, and the 2nd and 3rd battalions of the 13th regiment, moved on Hsiao-tung-tai while in the centre the 2nd and 3rd battalions of the 45th regiment advanced on Erh-shih-chia-tzu. They were ordered to lie down and entrench themselves as soon as fire was opened upon them. The position for the firing line had evidently not been previously ascertained by patrols, although this would have been a better method.

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\* Doppelzugkolonne.

† According to *von Tettan* the formation was as follows: Three companies in dense firing line in front; with 3 battalions 150 paces in rear, each of which has 2 companies in two lines 50 paces apart and with 50 paces interval. The "Scout party" on the right flank. Communication was maintained by connecting files.

‡ Yin-te-nin-lu.

Three companies of the 2nd battalion (covered by scouts about 100 yards in front of them) advanced in company columns with about 150 yards between them. Touch was maintained by connecting files. The 4th company was echeloned behind the left flank, while the 3rd battalion was in rear of the centre. About 9-30 P.M. after the 2nd battalion had advanced some 600 yards, heavy musketry and artillery fire was opened upon it, and it entrenched itself. About an hour later the advance was resumed, but soon after, as fire was again opened upon it, the battalion halted once more and once more entrenched. While the work was going on, patrols ascertained that about one Russian company was pushed some 300 yards in front of the village. The work of entrenching was then discontinued, and the battalion advanced another 150 yards or so; it then entrenched itself again some 500 or 600 yards from the Russian line, without being noticed by the enemy. The fire opened at daybreak and was the first intimation to the Russians that the attacking force was already entrenched at close range.

The 1st battalion (45th regiment) had acted in a similar way; advancing on the enemy's flank from one series of shelter trenches to another, the successive positions being well selected by patrols. The Russian flank gave way before this enveloping attack, falling back first from Erh-shih-chia-tzu about midnight, and then from Yin-te-nin-lu; the 3rd division thus met with but feeble resistance, and notwithstanding the absence of natural cover the attack was carried through without a hitch.\*

The use made of entrenching tools is worth noting, though the procedure of advancing until fired upon can hardly be approved. The position to be taken up should be reconnoitred by day through field-glasses, examined subsequently by patrols, and then occupied in one movement. In the present case the 2nd and 3rd battalions (45 regiments) only had to advance some 1,500 yards over open ground against a village which was clearly visible by day.

## VI.

It is interesting to compare the views held on both sides with regard to night operations. General Kuropatkin considered that the best guarantee against being surprised by night, was to husband the strength of the men. In his memorandum of the 4th November, he pointed out that there is a limit to men's moral and physical strength; even good troops are worn out by a few successive nights without sleep. If, in addition the men are under-fed, they become overwrought and agitated in the vicinity of the enemy, and are incapable of resisting an attack by night. The men must have sleep and warm food even in advanced positions. The sense of security afforded

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\* The troops entrenched themselves during the night, and the enemy's dispositions (including the positions of three batteries) were cleverly ascertained by means of officers' patrols.

by field fortifications and obstacles is invaluable in enabling the men to rest and sleep.

His subsequent memorandum of the 1st January, contains a passage very liable to check all power of initiative. After recognizing the value of night operations, he continues :—" but it must not be lost sight of that night operations with a large force are risky, and that the result does not depend upon numbers so much as upon the quality of the troops. It is for Army Headquarters to decide whether a given point should be captured by a night attack, or not." The delivery of counter-attacks, however, immediately after the repulse of a hostile night attack, was still left to the initiative of individual commanders.

On the Japanese side, the General Staff of the 2nd Army formulated the experience which had been gained in night operations and still greater activity in that respect was the result. The principles enunciated were, that infantry (after thorough reconnaissance) should establish and entrench themselves at a distance of about 1,100 yards from the enemy. As long as it was in any way possible the advance would be made by day; but in open ground, especially after the standing millet had been harvested (from the middle of October onwards) the hours of darkness were to be used for movement and for bringing up ammunition, supplies, etc.

It was suggested that during the second night the infantry should construct strong trenches some 650 to 800 yards from the enemy; during the following night, part of the artillery (especially howitzers and mortars) should push on to 2,000—2,200 yards of the enemy. If the infantry is entrenched at the distance suggested, it should be possible to study the hostile position closely, and to decide whether an immediate attack is possible or not. If the enemy has machine guns, the infantry will have to remain at about 1,100 yards until field guns have been established under cover, with a view to destroying the hostile machine guns next morning.

During the third night, the infantry should push forward to within 300—400 yards of the position, as it is impossible to dominate a well covered enemy by rifle fire, or to destroy obstacles, at longer ranges.

In the 1st Japanese Army, which had hitherto chiefly fought in the mountains, the experience gained led to the conclusion that a night attack, directed against a hostile force holding a height, should be deliberate. The attacking force should halt during its advance, especially in any dead angle of the ground, in order to re-form before assaulting. When the enemy opens fire, the force will halt again and lie down, until, after doing this three or four times, the actual charge is made, and the enemy's fire will then inflict little or no loss. The Russians frequently ran a line along the front of their positions, with bells attached, to give notice of any advance. It was suggested that patrols should be sent out to look for such lines and, after having attached a string to them, thus be able

to ring the bells at will, with a view to inducing the enemy to open fire before the actual charge was made. It was also pointed out that the Russian night attacks were nearly always made in small force, and were easily repulsed by heavy fire.

In the 5th division special importance was attached to a definite objective being allotted to each unit or fraction of a force; a general line of direction is liable to cause disorder in the dark.

It was found, as time went on that the difficulties of night operations became enhanced out of all proportion to the increased size of the force employed; and also that the scope of the success achieved became less and less as the Russians became more accustomed to night fighting. The only way to obtain the full effect of an initial success was to attack at dawn, so that any hostile counter-attacks might be dealt with by daylight.

During the fighting on the Sha Ho, the Japanese 1st Army shewed a decided disinclination for night attacks, though this was due, in many cases, to the exhaustion of the troops. The strength of the Russian fortified position around Mukden first led to the resumption of night operations on a large scale. An eye-witness, Major v. Dani,\* of the Austrian army, describes the tactics of the infantry of the 1st Army as follows:—"The attacking force (in formations adapted to the ground, but, generally in ordinary columns of route), was preceded by a chain of patrols, accompanied by men carrying hand grenades. When near the enemy, a fighting formation with reduced intervals and distances would be assumed. The advance was made slowly, and accurately, and in the deepest silence. There were frequent halts to restore formations, etc. If the enemy opened fire, the whole force lay down. If the advance was not noticed by the enemy, the assault would be carried out in silence. Often during the last 100 yards, several halts would be made. As a rule, there would be no firing unless the target was clearly to be seen. Premature fire is ineffective, and merely betrays the position of the troops to the enemy. Still it was not always possible to prevent firing, as it was quite exceptional to issue orders for rifles not to be loaded. The majority of night attacks were decided by the bayonet. The hand grenade was found to be an extremely effective weapon, both for offence and defence. For longer distances than they could be thrown by hand, small improvised mortars were used with good results."

Night operations are forced upon us by the improvement of fire arms, and their necessity cannot be eliminated by enumerating their difficulties. The success of a night attack depends upon taking the enemy by surprise, and upon surmounting difficulties with skill and silence. "No firing" should be the rule, though it may often be useful, (as also are cheers and drums) for misleading the enemy. Careful reconnaissance and thorough previous training in peace time, are essential conditions of success. As to the value

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\* Vide *Strefleur*, January 1907.

of such training in peace time, Sir Ian Hamilton in his remarks on the training of 1907 says :—

“Perhaps the most important point is the time and labour devoted to night operations. The 7th Brigade were engaged for about 14 nights, in all weathers, in practising night marches, attacks, and defence. The most important lesson learnt is the obvious superiority of a force thoroughly trained in night operations, over troops not so trained. It is the same advantage as that enjoyed by a blind man in the dark . . . . . The General Officer Commanding feels convinced that night operations on a large scale are by no means too difficult for well-trained troops, though they may be so for officers and men only superficially trained, who have no faith in their leaders or comrades, and no experience of the phenomena of night operations.”

Translated by H. H. DOWDING.



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## CO-OPERATION BETWEEN ARTILLERY AND INFANTRY.

BY MAJOR A. T. ANDERSON, ROYAL FIELD ARTILLERY.

The co-operation of Artillery in the support of Infantry is a matter of such vital importance, that no efforts should be spared to ensure its being efficiently carried out. And yet although we have all heard "great argument about it and about," no definite rules of procedure have yet been evolved, and it is seldom that one sees any serious attempt made to cope with the problem during practice camps or manoeuvres. I have read, and heard it stated, that the new Field Artillery Training has dealt exhaustively and finally with the subject; but personally I must confess to a feeling of disappointment at the purely theoretical nature of the instruction given therein, excellent though it is as far as it goes. In a training manual, which must deal chiefly with principles, this brevity is probably unavoidable; yet in a case like this, which bristles with difficulties, general principles seem hardly enough. We are all agreed as to the necessity of co-operation; we are not all agreed, and we can find little guidance, as to how it is to be carried out. I propose here to draw attention to a few of the difficulties with which we are faced, and to offer some suggestions as to how they may be surmounted.

First let us examine briefly the teaching of our training books on the subject.

*The opening phase of the attack*, while our infantry is advancing through the zone swept by artillery fire. In this phase the artillery usually engages the hostile batteries from covered positions. If this cannot be done, owing to the difficulty of locating the enemy's guns or for other reasons, fire is reserved, and efforts directed towards further reconnaissance. This is all simple and straight forward enough and calls for no special comment.

*The second phase*, when our infantry begin to feel the enemy's rifle fire. "The two arms must communicate freely, and the artillery must watch the progress of the infantry closely." Again, "it will usually become necessary for the artillery to move forward to positions from which it will have a clearer view of the infantry fight." It is recognized how difficult any such forward movements must be, and we now find sanction in our Field Artillery Training for dribbling forward a battery even by single guns. It is further laid down that "to support an attack with success a battery commander must be able to see the ground over which the infantry is advancing, and also be able to control the fires of his battery rapidly, but the more cover that can be obtained compatible with control by voice, the better." This paragraph suggests many difficulties; it is implied that the battery commander must be near enough to his



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battery to command by voice, and yet near enough to the enemy to be able to keep the movements of his own infantry constantly in sight. The practical gunner knows how seldom a position can be found combining these advantages. If it cannot be found, then communication must be maintained by some other means, and if the battery commander is to remain within hearing of his battery, then another artillery officer must be sent forward, and the question has yet to be solved how best he may keep the battery commander in touch with the ever-changing requirements of the attack.

*The third phase*, when the infantry are getting up to the point from which they will deliver their assault, say, 250 yards from the enemy. It is laid down that at this stage "battery commanders must do all in their power to improve their facilities for observing closely the course of the action, and must keep the most complete control over the fire of their batteries that it is possible for them to exert." Artillery must maintain their support up to the last possible moment. Official opinion differs as to how long this fire can be kept up. The Field Artillery Training lays down that artillery fire on the point of assault must cease when the attacking infantry are within 500 yards of it, as "the losses that may be inflicted by wild artillery fire at this period may imperil the success of the whole operation." The Field Service Regulations, on the other hand, show a far less cautious spirit; "fire will be continued until it is impossible for the artillery to distinguish between their own and the enemy's infantry. The danger from shells bursting short is more than compensated for by the support afforded if fire is maintained to the last moment." Certainly 500 yards is a long distance over which to expect infantry to assault without the support of guns; but in any case the difficulty of inter-communication in this third phase is enormous. Even supposing the artillery to have pressed forward in the second phase to within 2,000 yards of the point of assault—and they can hardly hope to get nearer—it will more often than not be impossible for the battery commander to distinguish properly between attackers and attacked, if he is to remain himself within close touch of his battery. Here again he must rely on signals from the artillery officer in advance; and it must be remembered that at this stage every moment is of importance; the signals must be very clear and definite, and it will be necessary to act on them at once. Only those who have tried it practically know how difficult it is to indicate an objective from a distance by signals (*i.e.*, without the use of instruments of precision, such as plotter, director, etc.). It may be easy enough to signal, "We are checked by infantry fire from the knoll 400 yards north-east of us," but from the battery commander's point the knoll may be merged in some other feature, and it is often quite impossible to estimate an oblique distance of a few hundred yards from a mile or so away.

I have written enough to show how many difficulties are to be faced in the solution of the problem, which indeed must remain a difficult one whatever system be adopted; no cut-and-dried method

of co-operation can be devised to meet every case, but it is my object now to suggest a procedure which I believe could be adopted with success in perhaps the majority of cases. We will imagine an occasion on which one or more batteries have been temporarily allotted to act in a "group" against a position. The first phase is over and a battery is ordered to give close support to the infantry. It is already in position under cover at, say, a range of 4,000 yards from the final objective. If possible, the battery commander, on receiving this order, advances his battery to a position, *still under cover*, from 2,500 to 3,000 yards distant from the position. Now if he stays close to the battery himself he will find it well nigh impossible to give the thorough support which the infantry commander has a right to expect from him. Of course, he may have no choice in the matter, and if he *must* stay behind he will have to depend on information sent to him by the artillery officer who has been sent on with the infantry in front. I shall revert later to the procedure which must be adopted in such a case—a case which should be the exception not the rule. The normal procedure should be for the battery commander to ride forward himself and select an observing point as near the enemy as possible; his own infantry would probably be within 1,000 yards of the enemy's position by this time, and in ordinary country the battery commander should generally be able to find an observing point at about 1,500 yards from the objective of assault. From here he directs the fire of his guns and should be well able to give all the support required during the second phase of the attack. This method of fire control will not, however, suffice for the third phase, when great speed and exactitude will be necessary in turning fire on to the most critical points at the crucial moment. My suggestion is, therefore, that the second position should be occupied by four guns only, while the remaining section is pushed on after the battery commander, and brought into action close to his observing point—further along on the same crest if he is on a hill—in a position concealed from view if possible, but sufficiently in the open to allow of the guns being laid direct for line. It may be urged that it would be impossible to push guns so far to the front; well, it would be exceedingly difficult no doubt, but not, I think, impossible. In manoeuvres attacks are carried out so quickly, that movements of this kind are difficult to practice; very often the artillery is not given time to carry out a thorough reconnaissance much less to complete the preliminaries necessary before opening fire, and the action of artillery is consequently often quite unreal; but the advance of the infantry would be much slower in a modern battle than it is in mimic warfare, and a long interval of time would usually elapse between the beginning of the second phase and the actual delivery of the assault. During this time the section will be pushing forward from point to point, by single guns if necessary, making wide *détours* perhaps in order to keep under cover, traversing open spaces at a rapid rate a single vehicle at a time, and for the last stage, it may

be pushing the guns forward by hand under cover of the shields. We gunners may admit that such advance would be slow and laborious, but we ought to hesitate before condemning it as impossible. Once the guns are in position they should reserve their fire until our infantry have reached the point from which they intend to deliver the assault, or at least until the need of support is very urgent. They may have been fortunate enough to arrive unnoticed, in which case the element of surprise will be of great moral value, and in any case there is no object in drawing the enemy's fire earlier than necessary, and thereby running the risk of being destroyed before they have achieved their mission. When the time does come to open fire the battery commander has merely to order the section commander to carry on with "section control," and the latter will be able to see at once and with his own eyes exactly where and when his support is most needed. Meanwhile, of course, the battery commander can continue to assist with the indirect fire of the rest of his battery. To bring this section *nearer* to the enemy's position than 1,500 yards would be undesirable, owing to the great risk of firing over one's own infantry. If observation is still found to be difficult—as no doubt would often be the case—one of the look-out men, or even the section commander himself, might be sent some six or seven hundred yards to the front, *not* to direct the fire of the guns but to indicate by some pre-arranged signals when the assault is commencing, or when the fire of the guns is becoming dangerous to the attacking infantry.

Some such procedure as the above would, I believe, often be possible, perhaps more often than not; it may, however, sometimes occur that no guns—not even a section—can be brought nearer than to a range of 3,000 yards or so. In such a case the battery should be brought into action in an open or semi-covered position, and its commander would have no choice but to depend on the artillery officer in front to keep him *au courant* with the situation. The panorama sketch always made at the battery may here prove of great use. The officer who is to go on with the infantry should first have a good look at the country from the guns, comparing it with the sketch; then directly he gets up to his infantry he should again scan the ground and do his utmost to identify the various places from this new point of view before he has had time to forget its appearance from the gun position. It is essential that some code should be devised to facilitate communication. It is not necessary here to give a list of all the forms of message which should be arranged for; but a single instance will suffice to show the need of a code of some sort. The signal so often sent at manœuvres, "our infantry is about to assault the position," is quite useless; it may not reach the guns till several minutes have elapsed, and how is the battery commander to know *when* the assault is to commence? There might perhaps be a code word meaning, say, "Open gun fire on the position on receipt of this message; our infantry will assault one minute (or as the case may be) from its commencement." Then the artillery will know

exactly when the assault is beginning, whether it can be seen or not.\* It is laid down that the responsibility of keeping up communication between artillery and infantry rests with the artillery, but is there any reason why certain infantry officers should not be specially trained to send information back to the guns? The introduction of a one man rangefinder may lead to further possibilities, as a trained infantry officer equipped with one of these, a plotter, and an instrument for measuring horizontal angles, could then actually indicate at a pinch the exact spot for the guns to turn their fire on.

These suggestions are put forward not with any idea that they furnish a complete solution of the problem, but rather with a view to stimulate discussion, and to induce infantry officers specially to turn their minds to the subject, which is not a matter for the artillery alone, but one of vital importance to both arms. When the general principles of a subject have been authoritatively dealt with in the drill book, one is often inclined to let the matter rest there, and to think that there is no more to be done, only to find when the time of trial comes that unless all the details have been carefully worked out and provided for beforehand, a mere knowledge of general principles will avail us nothing.

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\* I put forward this suggestion, however, with some diffidence. Since I wrote this paper it has been pointed out to me by an experienced battalion commander that the actual assault can rarely, if ever, be timed to the exact second; that in fact the final rush forward takes place at the psychological moment, and not at the impulse of one directing will.





## A PAGE OF HISTORY.

BY MAJOR G. R. HEARN, R.E.

In the fifty-five years, which have elapsed since the colossal outbreak of mutiny in the Bengal Army, many books have been written on that subject, and in nearly every one the author, while considering that there were several contributory causes, has fixed on the cartridge incident as the last straw. This may be true, in so far that the inciters to mutiny exaggerated the facts, and the old King of Delhi, who may be considered an authority, wrote a verse to the effect that "It was a cartridge which brought defeat to the English, a defeat which neither Russian nor Persian could accomplish." But the true facts seem not to have been grasped, and we find in books of reference such statements as "A new type of rifle having been issued to the sepoy, the unhappy blunder was perpetrated of smearing the cartridge with offensive matter." This is a lamentable misapprehension, which must seriously warp the minds of readers, and it may be as well to state the real facts, for modern writers seem to be as unacquainted with them as the sepoy were. Incidentally the history of the subject may be interesting, as it shows the gradual progress of firearms.

At the risk of breaking the continuity of the subject, it is deemed better to give references to the sources of information; the works consulted are given in the bibliography at the end of the article.

Now the new rifle had not been issued to the sepoy, that is to say, it was not the standard firearm of the Company's Bengal Army, which was still armed with the old muzzle-loading "Brown Bess" musket, carrying a spherical bullet of .577 inch diameter (24-bore) and fired by percussion caps, having been converted from flint-locks in 1842. The Queen's regiments in India, and both European and Indian infantry of the Company's Bengal Army, were armed with this weapon, except certain Frontier Corps, and the Rifle companies of certain regiments; the rifles with which the latter were armed will be noted later.

"Brown Bess" was officially effective up to six or seven hundred yards, but actually practice was indifferent at a range greater than eighty yards; at three hundred yards it was a difficult matter to hit a target eighteen feet square, and successive shots struck the target three or four feet apart: this was due to the excessive "windage" or difference of diameter between ball and barrel. In the *Journal U. S. I.* for January 1910, it was stated that the 5th Punjab Infantry, in 1851, made only 24 per cent of hits at 100 yards (size of target not stated) and 47 per cent in 1853 at the same range. The charge gave such a tremendous recoil that the men frequently threw away a portion of the powder, and this may account for the poor

practice, but the soldier usually waited until he saw the whites of his enemy's eyes, before he fired. It was calculated that only one bullet in 250 was fatal (some gave the figure as one in 800), but the wounds inflicted by it were very severe.

Rifled small-arms had been in use by private persons for many years—one had been invented as early as 1520—and in 1680 rifled carbines were issued to the Life Guards, but their general use in the British Army did not commence until the beginning of the nineteenth century. In 1800 the 95th Foot was formed into the Rifle Brigade, and was armed with a rifle invented by Ezekiel Baker; this was a 20-bore ( $\cdot 623$  inch) seven-grooved rifle, with only a quarter of a turn in the rifling, and sighted to 100 and 200 yards. The bullet was spherical and a hollow anvil was provided at the bottom of the bore, so as to set up the bullet; the ramrod was struck with a small wooden mallet (R. B. App. II; 60th; and B. M. R., Sec. III, 8). Cartridges were not used, but the powder was poured in from a horn; the bullet was wrapped in a greased rag, or "patch," a supply of which was carried in a small brass box, let into the stock of the weapon. A few of these rifles were 24-bore so as to take the musket-ball, but these did not meet with approval. This rifle had been introduced into India, and was in use by the Rifle companies of certain regiments such as the European Bengal Fusiliers; the Bengal Military Regulations 1855, give instructions about carrying the mallets.

In 1837 or 1838, the Brunswick rifle was substituted for the Baker; this had two grooves only, and one whole turn in the rifling, and the bore was increased to 12-bore (about  $\cdot 700$  inch, 60th; Journal U. S. I. No. 178). The bullet was still spherical, but a belt was cast on it to take the grooves; when these became leaded after much firing, the loading became somewhat difficult, and the greased patch always had to be very carefully wrapped round the bullet or the ramming home had to be forcible. The lock was a detonating one, and the rifle was sighted to 300 yards (Journal U. S. I. No. 178). The ammunition for this rifle was made up into cartridges without the balls; the powder was contained in blue paper wrappings, of which both ends were tied, and the (blank) cartridges were made up into bundles of ten. The balls were carried separately, five in a string, enclosed in small cloth bags, and the patches were issued from the arsenals ungreaed; the lubricating matter, beeswax and country oil, was issued in bulk, and the patches were only greased when firing was about to take place. The blue paper of the cartridge was not put in to act as wadding as was the practice with the musket (B. M. R., Sec. II, 19, 20, 23).

The 60th Rifles were armed with this rifle when they landed in India in 1845 (60th), and some of the infantry of the Frontier Force received it such as Coke's Rifles; the 5th P. I. were armed with it in 1857, probably after the 60th Rifles were re-armed with the Enfield. The elliptical-bored Lancaster, and the Minie adopted in the British service in 1851, do not appear to have been sent out.

although it is said the Guides Infantry were armed with this rifle at the siege of Delhi. The Minie had a conical bullet, which was expended by an iron cup at the base, and was effective up to a thousand yards or more, but it was found that the cup was occasionally blown through the leaden bullet, and the Enfield soon replaced it at the end of the Crimean War, before which the Enfield was under trial.

The Enfield rifle also was muzzle-loading (it was converted afterwards into the breech-loading Snider), with three grooves and half a turn in the rifling, which gave it a range of at least 1,500 yards; the bore was  $\cdot 577$  inch. The Pritchett bullet had a hollow base, and a wooden plug, to expand the bullet into the grooves, but this plug was soon abandoned as unnecessary. There were, however, some more important innovations, in the cartridges. They included the bullets, they were issued from arsenal ready lubricated, and the blue paper was discarded for a glazed paper, to prevent loss of the lubricant, which, in accordance with experiments carried out in England, was composed of a mixture of tallow, stearine and wax. It was thought that the mixture of beeswax and country oil, which had answered for the "patches," greased only just before firing, would not do, as its lubricating qualities disappeared.

Now, as to the composition of this lubricant, it is fairly certain that such cartridges as were sent out to India could not fail to be offensive. Some boxes were sent in 1853 for trial and report, and some packages were issued to the main guards at Fort William, Cawnpore, and Rangoon, to be carried in the pouches for a time and then returned with a report. These packages were returned to England with the report, and none of course were fired, for the guards were not armed with the rifle. The remainder of these boxes were sent up to the 60th Rifles at Meerut, but the manufacture of Enfield cartridges was commenced at Dumdum, partly for the use of the 60th Rifles (Kaye I, 515), and partly for the use of European troops proceeding to the China War, partly also for the use of the Bengal Army, when it should be re-armed. The tallow was supplied by Gangadhar, Banerji & Co. of Calcutta, a Hindu firm, but is supposed to have been of an offensive nature. (Kaye I, 517).

The drill for the Enfield rifle was somewhat different to that for the Brunswick, because the bullet and wads were contained in the one paper, and not separate. The cartridge was held with the bullet in the palm of the hand, the end of the part containing the powder was bitten off (as in the case of the blank cartridges of the older rifle) and the powder poured into the bore. The bullet and wads, still in the paper, were then placed in the bore and rammed home. But, as the cartridges were bundled end for end, the lubricant would ooze out to some extent, and adhere to the powder end, and, if it be granted that it was offensive, the caste of the sepoy would be affected.

Up to this point, therefore, the Government were on the verge of a serious mistake, but this mistake was found out in time. So



## CO-OPERATION BETWEEN ARTILLERY AND INFANTRY.

BY MAJOR A. T. ANDERSON, ROYAL FIELD ARTILLERY.

The co-operation of Artillery in the support of Infantry is a matter of such vital importance, that no efforts should be spared to ensure its being efficiently carried out. And yet although we have all heard "great argument about it and about," no definite rules of procedure have yet been evolved, and it is seldom that one sees any serious attempt made to cope with the problem during practice camps or manoeuvres. I have read, and heard it stated, that the new Field Artillery Training has dealt exhaustively and finally with the subject; but personally I must confess to a feeling of disappointment at the purely theoretical nature of the instruction given therein, excellent though it is as far as it goes. In a training manual, which must deal chiefly with principles, this brevity is probably unavoidable; yet in a case like this, which bristles with difficulties, general principles seem hardly enough. We are all agreed as to the necessity of co-operation; we are not all agreed, and we can find little guidance, as to how it is to be carried out. I propose here to draw attention to a few of the difficulties with which we are faced, and to offer some suggestions as to how they may be surmounted.

First let us examine briefly the teaching of our training books on the subject.

*The opening phase of the attack*, while our infantry is advancing through the zone swept by artillery fire. In this phase the artillery usually engages the hostile batteries from covered positions. If this cannot be done, owing to the difficulty of locating the enemy's guns or for other reasons, fire is reserved, and efforts directed towards further reconnaissance. This is all simple and straight forward enough and calls for no special comment.

*The second phase*, when our infantry begin to feel the enemy's rifle fire. "The two arms must communicate freely, and the artillery must watch the progress of the infantry closely." Again, "it will usually become necessary for the artillery to move forward to positions from which it will have a clearer view of the infantry fight." It is recognized how difficult any such forward movements must be, and we now find sanction in our Field Artillery Training for dribbling forward a battery even by single guns. It is further laid down that "to support an attack with success a battery commander must be able to see the ground over which the infantry is advancing, and also be able to control the fires of his battery rapidly, but the more cover that can be obtained compatible with control by voice, the better." This paragraph suggests many difficulties; it is implied that the battery commander must be near enough to his

far as the Bengal Army is concerned, only the 60th Rifles had been completely re-armed (on January 1st, 1857), and a few rifles had been issued to other Queen's regiments. But the decision to re-arm the Company's army also made it necessary to instruct it in the use of the weapon, and a General Order of the Commander-in-Chief, Bengal Army, ordered (December 12th, 1856) that each European regiment (whether Queen's or Company's) should send an officer and five men, and that each sepoy regiment should send a European officer, an Indian officer, and five men, to a musketry dépôt for instruction. The dépôts selected were Dumdum, Umballa and Sialkot, and the date of commencing was fixed as January 15th, 1857; it is important to notice the dates.

Hardly had the parties assembled at Dumdum when the well-known incident occurred and a laboratory lascar taunted a sepoy of the 2nd Grenadiers with the approaching loss of his caste. The talk among the sepoys came to the ears of their officers almost at once, and a parade was ordered on January 22nd, when the matter was discussed, and a request was made by the Indian officers that beeswax and oil as before might be retained for the new cartridges. On January 27th Government ordered that the sepoys might lubricate the cartridges themselves, with any material of which they might approve, and which they might purchase in the bazaar. On the 28th, the Inspector-General of Ordnance was instructed to issue all cartridges from the factories free of any lubricant, and he passed on these orders accordingly to Delhi and Meerut. Telegraphic orders were sent to the officers commanding at Umballa and Sialkot, stating the orders of Government on the subject. The Board of Directors of the Company were addressed, and requested to send out no more English-made cartridges. After January 27th no cartridges made at Dumdum were lubricated, even for issue to British troops.

At Umballa, forty-three officers and a large number of men were collected, but instruction did not commence until the beginning of February, by which time the orders of Government had been received, for a correspondent of the *Delhi Gazette* newspaper, writing on February 3rd, mentioned that no ammunition was to be issued to the sepoys at that dépôt, and that they were to be instructed in the theory alone. There is no precise information available about the Sialkot dépôt, but there is no reason to suppose that a different procedure was followed.

In the last week of February, the European and Indian officers at the Dumdum dépôt were instructed in the process of cartridge making; the theory of the rifle had by this time been explained, but instruction had not arrived at the point, where the cartridge was brought into practice. It must be remembered that a loaded rifle could only be unloaded with some difficulty, and usually was fired to get rid of the charge, so that loading would only be undertaken in the last stage of the instruction. A section of the sepoys at Dumdum having shown reluctance to learn cartridge-making, Gov-

ernment ordered that they should stop short of loading, and also that the drill should be altered. The biting of the cartridge was to be stopped, and the end was to be torn off with the fingers. This order was extended to the old musket also, and unfortunately appears to have interpreted into an admission that something was wrong with the old cartridges also.

In the third week of March General Anson, the Commander-in-Chief of the Bengal Army, arrived in Umballa on his way to Simla, and the regiment forming his escort repulsed their comrades at the musketry dépôt on the ground that they had lost caste. General Anson therefore called for some cartridges, and came to the conclusion that the lubricant was excessive, and looked unpleasant. Some English-made cartridges had possibly been sent here, but the *Delhi Gazette* declared that these particular ones had been made in the Delhi arsenal, and lubricated with ghi, bought in the bazaar, where tallow would certainly not be available.

However that may be, General Anson had all the sepoys at the dépôt paraded, explained the orders of Government as to allowing them to purchase their own material, and also the new method of loading. While professing themselves satisfied on these points, they objected to the glazed paper, and he ordered that they should not handle the new cartridges until a chemical examination of the paper had been made; this showed nothing objectionable whatsoever. The sepoys at Umballa commenced firing about April 17th, (Trial, 157) having made their own cartridges, and on May 5th a party of the 50th N. I. interviewed by a *Delhi Gazette* reporter, expressed themselves quite satisfied, although apprehensive about their reception in the regiment.

Therefore the claim that not a single offensive cartridge was placed in the hands of a sepoy appears clearly established, and is corroborated by evidence given at the trial of the King of Delhi (Trial, 157), that the sepoys were not allowed to touch cartridges lubricated before issue from arsenal. But that no amount of reasoning was of any use is shown by the action of the troopers of the 3rd Light Cavalry, at Meerut, who started the whole trouble.

There was no intention to re-arm the cavalry; only fifteen per troop were armed with carbines, similar to the musket, and the cartridges were the same as had been in use for thirty or forty years, as deposed by Indian officers of the regiment before the Court of Enquiry. But when a parade of the ninety troopers so armed was held by the commanding officer to explain the new method of loading (extended, it will be remembered, to the older weapons), only five out of ninety would take the cartridges, in spite of a personal order to each man individually. They could allege only a vague rumour of suspicion, but the Court, formed exclusively of Indian officers, were "unanimously of opinion that there is nothing objectionable about the cartridges, and that they may be freely received and used as heretofore without in the slightest degree affecting any religious scruple of either a Hindu or a Musulman."



At the subsequent Court-martial, also composed of Indian officers, a recommendation to mercy was made on the ground that the men had been misled by vague rumours (P. P.). Yet the Delhi and Meerut regiments, from which the members of these two courts were drawn, mutinied. How they were induced to do so is not within the scope of this article, which, it is hoped, may have corrected some widespread misconceptions.

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## PRECIS.

### THE GREAT DISCORD BETWEEN ENGLAND AND GERMANY.

(Page 79, "*Voenie Sbornik*," March 1912.)

In former times the economic interests of the English and German nations did not clash, and therefore there was no question of the possibility of an Anglo-German conflict. Later, development of national economy produced conditions of economic rivalry. This rivalry became keener, and finally became open strife in the sphere of external politics. This struggle grows keener every day, and perhaps to-morrow both nations will be forced to take up arms; the future of these nations will then be determined by a great battle in the North Sea. The great political importance of England and Germany, their immense national economic interests, and the exceptional might of their armed forces, are the causes that have made a possible quarrel between them a real factor in the politics of other nations, and, at the present time, it is no exaggeration to say, that this has become the foundation of external politics of the whole world.

What is this Anglo-German rivalry? What are the definite aims of these two nations?

The cause of discord cannot lie in abstract fears. Two nations cannot disagree without having some concrete and clearly-defined cause. Let us now try to discover it. The economic position, occupied by England amongst the nations during the nineteenth century, which she still continues to hold to a large extent at the present time, is unparalleled in the history of mankind. By her powerful efforts, her persevering will, and wise provision for the future England has been the ruling power of the world, forcing almost the whole of mankind to serve the interests of her national economy.

Without considering the racial virtues of her people, one can explain the exceptional position of England by the favourable conditions of her geographical position. Namely:—

- (1) Her isolated, insular position has aided in forming a close tie between the people and their country, thanks to which England outstripped other countries in the formation of a stable imperial government. It strengthened national sentiment, and early attracted the inhabitants to the exploitation of the natural riches of their isolated country.
- (2) England's position at the meeting point of great waterways aided the development of sea trade and maritime supremacy.

- (3) The narrow limits of the islands, added to the material prosperity of the people, long ago caused a superfluous population, which necessitated early colonial politics.
- (4) In addition to the above, the fact that the frontiers of England are entirely maritime caused the development of navigation. This evoked a tendency for world-predominance.

England commenced her career as a world-power in the beginning of the sixteenth century, but only became really energetic, when Cromwell introduced the Navigation Act, 1651. The abolition of the Edict of Nantes caused large numbers of educated Huguenots to emigrate to England, and their capital, enterprise, and energy had a great effect on the economic history of the country. The general slackness, which took place in the country in the eighteenth century, chiefly due to the results of a continuous mercantile policy, resulted in the War of Independence (1775-78). This effected a change for the better in colonial policy, and set English trade on a new and more rational basis. The last, but not least cause, which made England forge ahead of other nations, was the general introduction of machinery. The war of 1793—1815 finally destroyed the power of England's former rivals—France, Spain, and Holland.

For a hundred years, England had quietly benefited by the advantages of her position, when at the commencement of the twentieth century there began to be felt a certain uneasiness in business and economic circles. It then became clear, that the trade of the United Kingdom was growing less in comparison to the trade of other countries. It is true this decrease is hardly noticeable, and cannot at present have any real influence on the prosperity of the country. On going closely into the question, one must observe that there is an increase of imported goods of foreign manufacture, and a decrease of imported raw material, so necessary for the manufactories. And what tends to show that the national economy of England has entered on a disastrous course, is the increase of exported coal. Thus writes Jaens :—

“The best means of combating the might of English industry is to buy English coal.” This sale of coal does not enrich the country ; on the contrary, it deprives it of the source of energy, necessary for the development of trade. Not only is English trade lessening, but also her importance as a world-power. Let us now discover the cause.

Political economy has undoubtedly changed very much in later years. “Perhaps,” as Serenia writes, “Englishmen cannot adapt themselves to these changes.” But Englishmen everywhere have shewn their extraordinary talents for understanding a situation and adapting themselves to it.

Perhaps the English race have reached the culminating point in their development, and have begun to degenerate. Yet we can find no traces of degeneracy among the Anglo-Saxon races.

The cause of this decline lies outside the country itself.

England suddenly discovered that foreign ships with foreign produce entered her own ports. It seemed that British monopoly had come to an end, and that the United Kingdom had competitors in the field of trade and industry. In addition, the British colonies could not, and would not be the submissive humble slaves of the metropolis. Canada, Australia and even India refused to be dumping grounds for Great Britain. English merchants also found that Russia would not be a market for their goods, and that in France, as elsewhere in Europe, the shops were filled with goods marked "Made in Germany."

There still remains China as a market for ready-made goods, but the struggle for supremacy in the Chinese market has already begun. Some day China will be the object of a war between other powers, whose geographical and economic positions are far more suited to the capture of the Chinese market than that of the English.

Englishmen, however, fully realize their serious economic position. England must have her own market, which would provide her with cotton and other raw material, and would buy her manufactured goods. This would preserve the prosperity of the nation for years to come.

This market has been found—Africa. Africa has a large enough population to absorb the products of British industry. It is sufficiently "uncivilized" to be only a "market." Africa is thus all-important to Britain, and Britain must possess it. In this lies the life or death of the nation. When a handful of Frenchmen attempted to raise the tricolor in Fashoda, England mobilized her fleet and sent France an ultimatum. In Paris, it was known that England meant to fight, so the French yielded. Now let us consider what France has been doing in Africa. African territory, as we will point out, is not at all necessary to France, and her recent activity in Northern Africa is due to a group of influential financiers and adventurers. France trades far more with other civilized countries than with her colonies, her chief markets being England, Germany, Belgium, and the United States. This is obvious, when one considers that her chief exports are articles of luxury. The present French colonial possessions more than doubly satisfy the needs of the French. As the result of the Anglo-French Treaty of 1904, East Africa was considered to be in the sphere of British influence, and West Africa in that of the French. Thus England became paramount in Egypt, and France in Morocco.

After this, France no longer competed against England in the African market. The Cape to Cairo railway was becoming an accomplished fact. All was going well for England, when another power appeared on the scene—Germany.

Since the Franco-Prussian War of 1870, German trade has increased by leaps and bounds; as the Englishman Ford said: "What we have accomplished in a century, the Germans have attained in 25 years." The population of Germany has increased from 25 millions in 1816 to 65 millions in 1911. The mercantile marine

has increased from  $1\frac{1}{2}$  million tons in 1893 to 3 million tons in 1911. The export of goods from Germany into England has more than doubled since 1880. This all shows that the trade of Germany is flourishing and expanding. Notwithstanding all this, Germany is not satisfied with her international situation, and has shewn her discontent. The cause of her dissatisfaction lies in the fact, that all her produce is sold in markets, over which she has no political power. For instance, in 1898, the German export to America fell 20 per cent. owing to the Americans changing their tariff. Similarly, the introduction of "protection" in England would hit the Germans very hard. In fact, Germany needs territory, over which she will have the sole sovereignty, and where a permanent market for her goods will be guaranteed her. In addition to this, such territory would serve for the emigration of her subjects, who now go to other countries, and are lost to the fatherland. With this rapidly increasing population, emigration must also increase, and this forms the main reason that the German Government is so anxious to acquire new territory. It is true, that Germany at the present time owns colonies. But they have no future before them. They are quite unsuited for peopling by white races, and are thinly populated by natives. Their trade is poor. Germany realised too late the necessity for colonies, and the worst places on the earth have, in consequence, fallen to her lot. Germans now realize the mistakes made by Bismarck after the Franco-Prussian war. New territory is now essential to her. In Europe any new acquisition would be useless, as the land is already too thickly populated. America, Oceania, and the Far East are unsuited for German expansion by reason of their geographical positions. There are only two routes for expansion, which would really serve Germany well. Both lead direct from the trade centres of the country southward to the shores of the Adriatic, now occupied by the Germans of Austria. One route, leaving Slavonic territory to the East, goes to Trieste, and continues *via* Hertzegovina to Novibazar, across the Bosphorus to Bagdad, and from Bagdad to Khor Abdulla on the island Bubian in the Persian Gulf.

The other route lies across the Mediterranean to the African shore. Here it would be necessary to drive the French out of the N.-W. portion of the African continent, to take possession of the territory round L. Chad and the territory to the west of Ubangi and the Congo, and thus to obtain a firm footing on the Atlantic shores of Africa. Having taken the better portion of W. Africa, she could then turn her attention to the British East African possessions. German present-day politics may be summed up in the two phrases: "Drang nach Osten," and "Drang nach Afrika."

Unfortunately over both these routes flies the English Cross of St. George.

If Germany obtained supremacy over the first (the eastern) route, England's connections with the Suez Canal, Egypt, S. Africa and India would be cut. In fact, her main artery would be severed.

On the other route (*i.e.*, in W. Africa) is situated the sole remaining market, which England is preparing for herself in the future. These lines of expansion are necessary to Germany. England cannot possibly permit Germany to take them. On the possession of these depends the future welfare of two nations. No diplomat has yet been able to suggest a compromise. The whole world is anxiously awaiting the issue of the unavoidable war in the North Sea, which will determine the future fate of mankind. How it will end, it is impossible to say. A German expansion in Africa would mean an attack on French, Italian, Spanish and Portuguese territory, while the "Drang nach Osten" would finally close to Russia her sole outlet to the sea. Thus, in this "great discord," lies not only the fate of Germany and England, but of others also. All powers have great interests in its issue. That is why the politicians and strategists of the world are trying to solve this problem.

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### ENGLAND AND GERMANY.

(" *Voennie Sbornik*," April 1912.)

The article "England and Germany" is continued in the April number of the Russian *Military Magazine*. It is mainly a review of a special number of the *Ueberal Zeitschrift für Armee und Marine* in which the mutual relations of England and Germany are analysed by several Anglophobist German writers. The article is by B. Dolivo Dobrovolski who, in the opening sentences, says:—

"The mutual relations of England and Germany depend on the complete antagonism of their political interests, any concordance of which, even in the shape of a temporary compromise, is impossible. These interests are so essentially vital that neither side can voluntarily renounce them, and sacrifice them to the advantage of the other. In such conditions only one possible issue remains to the two nations—war, and this war has already been decided upon. If the rupture has not occurred before this, and does not occur in the immediate future, the only reason is that a war between England and Germany, owing to the specific character of their armed forces, could give no decisive results. On the one hand the German fleet is not in a position to establish command of the North Sea, and hence Germany could not invade England successfully; on the other hand, although the British fleet is probably able to obtain command of the Sea, the British Army is so incommensurably weak, that England could only obtain a passive advantage therefrom. The General Staff of both countries have correctly appreciated the situation, and both have naturally come to the conclusion that their countries are not ready for war."

"Before war breaks out, two steps must be taken—(a) political preparation, (b) the machinery of war must be perfected. This is exactly what both countries are doing now."

"Germany is devoting all her strength to develop her fleet. England is trying to introduce universal Military Service (*sic*), while the diplomatists of both countries are busy making treaties and agreements with a view to making the coming war not a duel but a war of coalitions."

In a former article it was explained in what respects the political interests of England and Germany differed, and the English point of view was examined in detail. The German case must also be set forth in order that a just appreciation of the situation may be formed. For the exposition of the German case we are fortunately able to refer to a recently published special number of the *Überall Zeitschrift für Armee und Marine* which has been sent to us for review. Many of the articles in this pamphlet are by well known men, such as Professor Sheffer, Dr. Von Makkay, and Admiral Shtige and may justly be considered to represent German public opinion.

The first article bears the title "England, her Development and We (Germans)" and may be described as an indictment of England as regards her political and military action during the last few centuries. The author begins by categorically disposing of the pacifist's declaration of England's desire for peace, and of her friendly sentiments towards Germany. He finds in her present methods of action a complete reflection of her past history and proves how almost every country in the world—Spain, Holland, France, America, Denmark and Russia—has been the victim of her double-dealing. Her impudent egotism, her persistent pursuit of her own advantage, and her overbearing attitude towards any nation which in any way interferes with her, are all the results of this systematic policy.

Then follows a review of the relations of England with Spain from the 16th century, in which the author misses no opportunity of showing British action in the worst possible light. The Russian critic points out at least one inaccuracy in this review.

A short account of Anglo-French relations is then given with the object, mainly of showing English perfidy, and examples are quoted of occasions on which England has attacked a nation without a declaration of war. The author expresses the belief that "war with Germany will be begun the same way." In short "history always and everywhere demonstrates England's treachery, her impudent disregard in her choice of methods, her egotism, and her inexorable cruelty towards her opponents."

Russia also has frequently suffered at British hands.

The article concludes with an epigram of Frederick the Great—"Machiavelli said that a country, which is neither covetous nor ambitious, will certainly go under amid countries which are both, and I regret to say I must agree with him."

After further vilification of Great Britain and British methods, the author calls for greater firmness in carrying out German policy.

"Germany must arm seriously and not be left behind by her powerful enemy (*sic*), who is arming not for defence, as the British Press loves to assert, but for attack. Germany does not want war, but if she wishes to restrain England from attacking her, she must have a powerful fleet equal to at least two-thirds that of England. A strong army is also necessary to oppose British Agents (*sic*) on the Continent.

Two other articles in the pamphlet are also worthy of special mention. These are entitled "The World Position of England and Germany" by Professor Sheffer, and "Germany and England" by Doctor Van Makkay. These articles differ diametrically in tone.

Sheffer says, "It is a long time since Germans regarded England so attentively as during last summer. It is now plain to us all that she does not wish us, and will not allow us, to have what is so essential to us. Will this, can this, should this be allowed to continue? Further on he expresses a doubt that Britain has been appointed by God to become the ruler of the sea"—as Englishmen sing in their "Rule Britannia." Time was when a continental nation had command of the sea. The island kingdom has been invaded in turn by Romans, Saxons and Normans. England's supremacy is of comparatively recent date. So in no sense can she claim to have any prerogative naturally arising from her privileged geographical position.

Reviewing the gradual expansion and consolidation of the British Empire the author endeavours to make a point by asserting that England's African possessions were extended in the eighties of last century, simply to keep Germany out. Plaintively he compares the populations and areas of British and German possessions, pointing out that though the population of Germany is nearly twice that of Great Britain, yet from London ten times as many subjects are governed as from Berlin. He blames the apathetic attitude of the German public and Government for the present state of affairs. "The less of Africa the better" was the official attitude. He scoffs at the German Government for retreating when England raised a threatening finger as a result of the "Panther" adventure. After all the dust that was raised, the net result is that Morocco belongs to France. German threats were useless, if they could not be carried out. In her foreign policy Germany is controlled by events instead of controlling them. "Germany's humiliation last year is especially distressing to Germans, for during the time of William I and Bismark, they had become accustomed to being strong and respected."

Again the conclusion arrived at is the necessity of increasing the navy and army, for unless this is done the very existence of the country will be in jeopardy.

Doctor Makkay's article is then reviewed. Referring to Sir Edward Grey's speech the author says: "It is a long time since Germany had to listen to threats of war, and she cannot now allow



herself to forget the insult." He reminds his readers of Bismark's reply to the Emperor's famous dictum, "Blut ist dicker als Wasser." "That may be so; but all the same blood is liquid and can flow, and I know of no occasion on which blood relationship prevented domestic quarrels turning into deadly enmity. History teaches us that civil wars are always the most stubborn and cruel." . . . . . Actually the whole of England, says Makkay, is breathing with hatred and enmity to Germany. Even her minister finds occasion to express Germanophobist sentiments, though the incident of the summer is closed. He scoffs at Sir Edward Grey's invitation to Germany to extend her African possessions by peaceful means, so long as British interests are not interfered with. Where can Germany go without coming up against British interests? It is but another sample of British impertinence and arrogance.

After the settlement of the Moroccan dispute, the centre of gravity in the rivalry of European Powers shifted to the Near and Far East, and here, as the British Press already recognises, the weakness of Britain is evident. The deficiency in her land forces is England's great weakness. It shows itself in the decision of the Balkan question, in Asia, in Egypt and in the Sudan. England is now trying to become friendly with the most powerful Land Power, in order to make her fight her battles for her and protect British interests.

Any agreement between England and Germany is possible only if founded on the principle of equality.

Vice-Admiral Von Shtige, whose article "German and English Peace Strategy," is next examined, declares that war between the two countries is inevitable, not so much on account of their political differences as of their strategical positions. So convinced is he of the inevitability of war, that he calls the present state of Anglo-German relations "veiled war," and declares that *de facto* a state of war already exists. At a given moment England will pass from veiled hostility to open aggression, without any previous declaration of her intentions. The only reason recent incidents did not end in an open rupture was Germany's unpreparedness. This lesson has not been lost on Germany. Like the other writers the burden of his song is the necessity of an increased navy, while he advocates that the distribution of the navy be altered, so as to be in a position to parry the sudden blow, which he is convinced will one day come from Great Britain. The Government must adopt a policy of aggression. "Germany is weaker than England and to equalise matters she must adopt the principle of unexpected attack." As soon as political relations become strained, and any British Minister makes an inflammatory speech, that speech must be answered by the thunder of German guns. This is the only course for Germany if she does not want to run the risk of losing the initiative.

Another article is devoted to a detailed analysis of the measures which Germany should take in the North Sea. The author

concludes, as a result of what happened in the summer, that England intends to act as follows:—

- (a) Carry out a sudden attack on the German fleet without any declaration of war.
- (b) Establish a blockade.
- (c) Disembark 160,000 men on the Continent to support France.

Though the incident is closed, the war cloud still hangs over both countries. That Germany does not want war is, the author asserts, proved by her peaceful policy during the last forty years: but the choice does not now lie with her. Germans must realise that war is inevitable. It will not be a war for markets or territory or more favourable trade conditions, but a war which will decide the very existence of the Empire. Hence no sacrifice can be considered too great in order to provide the forces necessary.

Germany has gained a distinct advantage by the exposure of England's strategy in 1911. She now knows she must be prepared for a sudden attack on her fleet, the establishment of a blockade, and the transfer of troops to the Continent.

Against the first there must be a well organised system of scouts and guard ships, an alteration of German naval dispositions, and an increase in the navy.

As regards a blockade the author does not believe in the possibility of effectively blockading the German North Sea Coast, but thinks that the Channel and Northern Scotland routes could be effectively closed, with possibly disastrous results to German industries and manufactures. Only a strong fleet, capable of doing the British fleet so much damage that the blockade would have to be raised, is an effective preventive of this. This also is the only effective reply to England's intention to transfer the Expeditionary Force to the Continent. A fleet strong enough to compel England to postpone the transport of troops to the Continent for even a few days is all that is required, for after the first few days of the campaign, the Expeditionary Force will be of no use to France.

To sum up, the burden of all the articles is the necessity of increased naval armament. Against a strong Germany, England will hesitate to enter into a war—a weak Germany she will despise. In both countries public opinion favour comprehensive preparation for war. Meanwhile both countries obstinately assert their respective love of peace, and the absence of any aggressive intentions.

The Russian critic remarks in conclusion:—"These peaceful declarations have no political significance, because both England and Germany have reached a point in their development, when an aggressive policy is unavoidable. The roads, along which each is advancing, are crossing one another. War between them is inevitable and the time for it is very near."



## REVIEWS.

**Official History (Naval and Military) of the Russo-Japanese War, Vol. II.**—Prepared by the Historical Section of the Committee of Imperial Defence. (Price, with case of maps, 15s.)

This volume contains a full description of the war from August 23rd, 1904, to January 2nd, 1905, a period which includes the battles of Liao-yang and the Sha Ho, and the siege of Port Arthur from the conclusion of the first general assault to the fall of the fortress. The history is admirably written; and the system adopted of briefly outlining main incidents, then describing them in detail, and finally summarizing their effects, causes the main features of the campaign to stand out in bold relief instead of being smothered in a mass of detail, as is too often the case in military histories. At the same time details have not been omitted. The history is written for those who wish to make an exhaustive study of the war. A long list of the works consulted is given in the preface, with special acknowledgements of the increased light thrown on the campaign by the Russian Official History. As in the case of the first volume much of the text is a repetition of the earlier Official History, but many new facts are produced, and the carefully weighed and constructive comments on the operations are never marred by partizanship or extravagance of expression.

In the outline of the battle of Liao-yang, which precedes the more detailed description, the operations are divided into four phases:—First, from August 23rd till the Russians withdrew from their outer line; second, from the initiation of the Japanese attack on the advanced position till the commencement of the Russian withdrawal to their main position on the following day; third, the withdrawal to and defence of the main position, and the operations on the right bank of the Tai-tzu up to the morning of the 3rd September; fourth, the Russian retreat. Into this framework is fitted the subsequent account of the battle.

Limitations of space forbid any examination of the details of this great struggle. The gallant determination of the Japanese to win at all costs, the skill of the Russians in retreat, the necessity of co-operation between the several portions of an army, the value of information, the doubts and difficulties that are the portion of a commander who even in his efforts at assuming the offensive conformed to the movements of his opponent,—these are only a few of the lessons impressed on the mind of the reader.

The battle was remarkable for two outstanding features:—

- (1) An army occupying a fortified position of its own choice, was attacked and defeated by a force numerically weaker.
- (2) The action of Marshal Oyama in dividing his forces at the critical moment of the fight.

Marshal Oyama, on August 28th, warned General Kuroki to prepare to cross the Tai-tzu. On the 30th Kuroki, drawing false conclusions from information received, proceeded to cross the river. Now on the 30th the Japanese attacks on the advanced position had failed and they had no reserves. Marshal Oyama must have known that the Russians were not retreating. Yet he did not countermand Kuroki's movement—a movement which separated his recently united forces by a river that was frequently unfordable, and which at first sight would appear to render the Japanese forces liable to defeat in detail. Marshal Oyama's decision may well be "characterized as momentous." The position of the Japanese army was critical. The risk of retirement with its accompanying loss of moral and of financial credit could not be faced. Marshal Oyama, possibly after weighing the character of his opponent and considering the apparent constitutional inability of the Russians to change from the defensive to the offensive, decided to apply pressure at the enemy's vital point and struck at the Russian communications. "What, therefore, may at first sight appear to be rashness on Marshal Oyama's part may in fact be a brilliant example of judicious opportunism, of shrewd exploitation of the suspected weaknesses of an opponent, and of correct diagnosis of the true line of least resistance." "On the whole, and in the light of its result, Marshal Oyama's action bears testimony to an insight, judgment, and a boldness of character which stamp its author as a great commander."

Was Liao-Yang a Russian defeat? The Japanese did not gain the tactical success they hoped for, but they captured the strategic centre of Southern Manchuria, drove the Russians further from Port Arthur, and, most important of all, they gained confidence in their own invincibility.

General Kuropatkin objected to the use of the term defeat by the Russian Minister of War in referring to the battle of Liao-yang, but he was met by the reply that "the side which attains its object at whatever cost, has won a victory; while the side which fails to do so has suffered defeat." The authors of this history add—"Posterity will doubtless endorse the opinion of the Russian Minister of War."

Chapter XXXVI gives an account of the transport and supply difficulties encountered by the Japanese during their advance to Liao-yang. It adds to our appreciation of the value of our Indian transport to read of the inefficiency of the hired local transport, and that the scale of payment to Chinese carters "was at first 2½d. for every bushel carried 2½ miles, at which rate a cart could earn from £1-10s. to £2 a day." This rate afterwards rose to 4d. a bushel.

The battle of the Sha Ho was for the Japanese a triple victory:—strategical, in that the Russian advance did not relieve the pressure on Port Arthur; tactical, as the Russian plan of battle failed; and lastly, the psychological influence of the battle on the mass of the Russian troops was depressing; their advance had only

resulted in loss of life followed by retirement. An interesting criticism is given of the factors which led to this result. The Russian plan of action was faulty in that by attacking the Japanese right instead of their left a blow was aimed at a subsidiary, not a main, line of communication, while at the same time the Russian right, their important flank, was left open to counter-attack. The plan promised the minimum of gain with the maximum of risk.

If the plan was weak, what of its execution? Kuropatkin announced that he was taking the offensive. His conception of the rôle permitted him to retain about one-third of his force in reserve, which he failed to use effectively. His orders enjoined caution on his subordinates, they were instructed to entrench and adopt a defensive attitude if the Japanese assumed the offensive. Truly a very travesty of the offensive spirit! The battle extended over a front of 50 miles, and Russian means of communication were indifferent, yet there was no real delegation of command. General Kuropatkin tried to control nine bodies of troops. Fresh orders were not issued to the whole army as required, with the result that there was no coherent general policy to guide the higher commanders.

Contrast these methods with those of the Japanese. They did not wish to fight; they were fulfilling their object by simply holding the Russians back from Port Arthur. But note Marshal Oyama's idea of a defensive battle. On hearing of the Russian advance he concentrated his troops. Not till the 10th October did he formulate his plan,—a plan which, scorning passive defence, launched a great counter-attack against the Russian right, the vital flank of their army. The Japanese were the army attacked, but the word "defence" finds no place in Marshal Oyama's orders and instructions.

The bold policy which left a small fraction of the army to oppose the advance of the Russian Eastern Force, while every available man was concentrated for the main effort, was in accordance with true principles of economy of force. Subsequently when the Russian strength in the west was disclosed, Oyama had to modify his plan, but he never abandoned the offensive. He drove the Russians across the Sha Ho. Throughout the battle homogeneity of action was maintained by the issue of operation orders for the whole army.

As in the higher command so in the leading of subordinate formations Japanese superiority was apparent. To quote perhaps an extreme instance, the attack of the 6th Siberian Corps on the left of the Japanese Army on October 14th: "Before moving off General Laiming's Brigade was formed up and deliberately inspected by company and battalion commanders in full view of the Japanese. The mounted officers then dismounted, and the advance began in quick time, without any attempt at extension as regularly as on a peace parade. After crossing some two hundred or three hundred yards of open ground in this formation single rank was formed, and the movement was then continued almost without a shot being fired." It is not surprising to read that the Japanese watched these

proceedings with "interest and amazement." The Yukhnov Regiment lost nearly 2,000 men. "Personal valour alone was found to be a very inadequate substitute for courage guided by trained intelligence." In the Japanese army, on the other hand, while there was the same determination to win as was displayed at Liao-yang, yet the lessons of that battle had borne fruit, the value of artillery co-operation was realized, and science and method characterized their attacks.

The last chapters of the volume describe the naval and military operations ending in the fall of Port Arthur. It is perhaps unfortunate that this portion of the history was not reserved for the third volume to which limitations of space have relegated the comments on the siege and defence of Port Arthur. To have comments in a different volume to the events commented on, is an inconvenient arrangement, and, moreover, the present volume is over bulky.

The interdependence of naval strategy and land tactics is well illustrated by the effect the movements of the Baltic Fleet had on the operations of the Japanese 3rd Army. The departure of the Russian squadron from Libau on the 15th October emphasized the instability of the Japanese situation. The position was unique. An island power had invaded the territory of a vastly stronger continental power without having achieved naval preponderance, and at the same time being unable to make good the material wastage of naval war. The Japanese had in a few hours suffered the loss of two first class battleships, and they had no means of replacing them. If the Baltic Fleet could unite with the squadron in Port Arthur there was the possibility that the victories of Liao-yang and the Sha Ho would be of no account. It was the ever-present dread of the loss of sea power that induced the Japanese to face the heavy losses entailed by their somewhat hasty efforts to reduce the defences of Port Arthur. It was Admiral Togo who suggested to General Nogi that 203 Metre Hill should be attacked. He did so because he estimated that the Japanese fleet would have to abandon the blockade by the end of November.

On the Russian side they were suffering from duplication of command, "jealousy and intrigue ran hand in hand with incompetence in high places." The shell that killed General Kondratenko gave the death blow to the Russian defence.

It is argued that the retention of the fleet in Port Arthur was well advised. There was no chance of defeating the Japanese at sea, the success of an attempt to dash to Vladivostok was improbable, while in Port Arthur the fleet could assist in the defence of the fortress, and there was always the chance that Kuropatkin might win a great victory and that the Baltic Fleet might arrive before the fortress fell. The methods of the Russian Admiralty in sending out reinforcements are criticised.

After studying the detailed account of the siege and defence of Port Arthur, the reader will endorse the final verdict of this history that it is "difficult to say whether the siege reflected greater glory upon the victors or the vanquished," and that the splendid courage

and resolution of the combatants will stand before the soldiers of all nations as brilliant examples of devotion to duty.

"The countries which produced the heroes of Port Arthur may well be proud of their sons."

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**The Soldier's Foot and the Military Shoe.**—By Major E. L. Munson, Medical Corps, United States Army. (Published by the U. S. Cavalry Association, Fort Leavenworth, Kansas.)

The proper care of the feet of the rank and file of the Army has received considerable attention in recent years, and a paragraph on the subject appears in the *Manual of Elementary Hygiene*, 1912; but it may be questioned whether it is generally realised how much inefficiency on service is due to neglect or ignorance of it. This book is the result of a series of exhaustive experiments in the U. S. Army spread over four years; the conclusions arrived at are of general application and are well worth studying. As the writer points out, the foot of the horse and its shoeing is carefully studied by all concerned with the mounted branches of the service; the foot of the soldier and the fitting of his boots is of greater importance still, but do not receive the same attention and care.

The book is well illustrated with radiographs showing the position of the bones of the foot in well and badly fitting boots, also the expansion when carrying the weight of the full equipment. One chapter deals with the care of the feet and the cure of minor defects, and gives many useful hints.

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**Guide to Promotion for Officers in Subject (a) (i) (Regimental Duties)**, by Major R. F. Legge, the P. of W. Leinster Regiment. 4th Edition. (Gale and Polden, 4s.)

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has been extracted, and the work should be a useful guide to young officers preparing for their examination in (a) (i).

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**Wellington and Waterloo**, by Major G. W. Redway (Jack).

This is one of the series known as the People's Books, which profess to bring within the reach of all the results of modern knowledge. In a small book of 90 pages, it is very difficult to do justice to the subject, but as an attempt to provide biography and history in tabloid form it is quite successful. The maps of the Waterloo campaign and battlefield are poor, and do not show all the corps or places mentioned in the text. The book is of little value to the military student.

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**Lectures on Musketry Training**, by Quarter Master Sergeant Instructor J. E. Price, School of Musketry, Hythe. (Messrs. Forster, Groom and Co., Ltd., 2s. 6d.)

This little book is written primarily for the Territorial Army, but the elementary lectures which it contains should be useful to those Volunteer Officers in India who feel that they have not the requisite knowledge to themselves expand and explain to their men the principles of musketry training as given in our text books.

The lectures deal with aiming and firing instruction, visual training and judging distance, training on the range, collective fire, and the use of landscape targets. In the appendices are a few elementary field practices which are carried out on the ranges at Hythe.

# United Service Institution of India

## PRIZE ESSAY GOLD MEDALLISTS.

- 1872...ROBERTS, Lieut.-Col. F. S., v.c., c.b., r.a.  
1873...COLQUHOUN, Capt. J. A. S., r.a.  
1874...COLQUHOUN, Capt. J. A. S., r.a.  
1879...ST. JOHN, Maj. O. B. C., r.e.  
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.  
1882...MASON, Lieut. A. H., r.e.  
1883...COLLEN, Maj. E. H. H., s.c.  
1884...BARROW, Capt. E. G., 7th Bengal Infantry.  
1887...YATE, Lieut. A. C., 27th Baluch Infantry.  
1888...MAUDE, Capt. F. N., r.e.  
    YOUNG, Maj. G. F., 24th Punjab Infantry (specially  
    awarded a silver medal).  
1889...DUFF, Capt. B., 9th Bengal Infantry.  
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Con-  
    tingent.  
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.  
1893...BULLOCK, Maj. G. M., Devonshire Regiment.  
1894...CARTER, Capt. F. C., Northumberland Fusiliers.  
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.  
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.  
1897...NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.  
1898...MULLALLY, Maj. H., r.e.  
    CLAY, Capt. C. H., 43rd Gurkha Rifles (specially  
    awarded a silver medal).  
1899...NEVILLE, Col. J. P. C., s.c.  
1900...THUILLIER, Capt. H. F., r.e.  
    LUBBOCK, Capt. G., r.e. (specially awarded a silver  
    medal).  
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.  
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.  
1903...HAMILTON, Maj. W. G., d.s.o., Norfolk Regiment.  
    BOND, Capt. R. F. G., r.e. (specially awarded a silver  
    medal).  
1904...MACMUNN, Maj. G. F., d.s.o., r.f.a.  
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regt.  
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry  
1908...JEUDWINE, Maj. H. S., r.a.  
1909...MOLYNEUX, Maj. E. M. J., d.s.o., 12th Cavalry.  
    ELSMIE, Maj. A. M. S., 56th Rifles F. F. (specially  
    awarded a silver medal).  
1911...MR. D. PETRIE, M.A., Punjab Police.  
1912...CARTER, Major B. C., The King's Regiment.

## MACGREGOR MEMORIAL MEDALLISTS.

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- 1889 — BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).  
 1899 — YOUSSEF SHAND, Capt. F. E., King's Dragoon Guards.  
 1891 — SAWYER, Major H. A., 45th Sikhs.  
     RAMZAN KHAN, Havildar, 3rd Sikhs.  
 1892 — VAUGHAN, Capt. H. B., 7th Bengal Infantry.  
     JAGGAT SINGH, Havildar, 19th Punjab Infantry.  
 1893 — BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).  
     FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.  
 1894 — O'SULLIVAN, Major G. H. W., R.E.  
     MULI SINGH, Sowar, 6th Bengal Cavalry.  
 1895 — DAVIES, Capt. H. R., Oxfordshire Light Infantry.  
     GANGA DYAL SINGH, Havildar, 2nd Rajputs.  
 1896 — COCKERILL, Lieut. G. K., 28th Punjab Infantry.  
     GHULAM NABI, Sepoy, Q. O. Corps of Guides.  
 1897 — SWAYNE, Capt. E. J. E., 16th Rajput Infantry.  
     SHAUZAD MIH, Dafadar, 11th Bengal Lancers.  
 1898 — WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.  
     ADAM KHAN, Havildar, Q. O. Corps of Guides.  
 1899 — DOUGLAS, Capt. J. A., 2nd Bengal Lancers.  
     MUHAR DIS, Naik, Bengal Sappers and Miners.  
 1900 — WINGATE, Capt. A. W. S., 14th Bengal Lancers.  
     GENDER SINGH, Havildar, 45th Sikhs.  
 1901 — BURTON, Major E. B., 17th Bengal Lancers.  
     SANDER SINGH, Colour Havildar, 31st Burma Infantry.  
 1902 — RAY, Capt. M. R. E., 7th Rajput Infantry.  
     TAMIR BIRSHAM, Havildar, 9th Gurkha Rifles.  
 1903 — MASTHEAD, Lieut. Col. C. C., R.E.  
     GHULAM HUSSAIN, Lance Dafadar, Q. O. Corps of Guides.  
 1904 — FRASER, Capt. L. D., R.E.  
     MAHAR BAZ, Dafadar, Q. O. Corps of Guides.  
 1905 — BENNETT, Major F., 40th Pathans (specially awarded a gold medal).  
     MAHMO RAM, Havildar, 8th Gurkha Rifles.  
 1906 — SHAHZADA AHMAD MIR, Rifleman, 36th Jacobite Horse.  
     GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.  
 1907 — NASSER, Capt. M. C., 92nd Punjabis.  
     SHUKH USMAN, Havildar, 19th Maratha Light Infantry.  
 1908 — GUNES, Capt. C. M., Royal Irish Fusiliers.  
     MAHASA, Havildar 50th Punjabi Rifles.  
 1909 — MUHAMMAD RIZA, Havildar, 16th Lancers.  
 1910 — SIKES, Major P. M., 1st, late 2nd Dragoon Guards (specially awarded a gold medal).  
     TAYLOR, Capt. F. G., R.E.  
     KHAN BORSU, in Sindh, J. S. Survey of India.  
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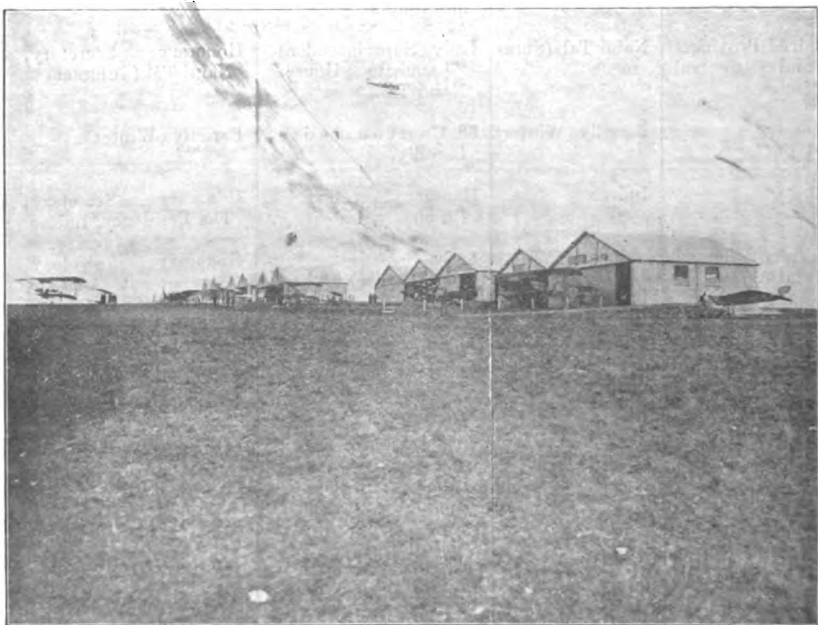
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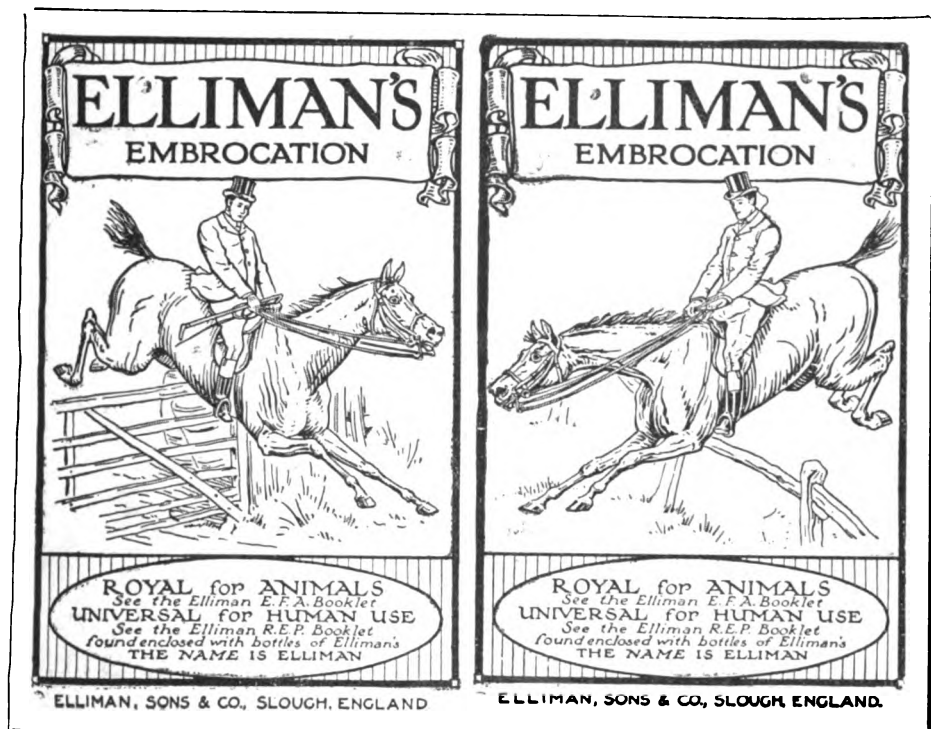
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- There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V.-P. for the postage, or bearing by railway.
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### "WASTE."

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Waste (foolish spending) is responsible for the greater part of the miseries and hardships suffered by mankind. The productive powers of man have enormously increased, yet never has there been a time when actual want was so common. Food, clothing and shelter exist in more than sufficient quantities for all mankind, yet thousands of civilized beings are daily lacking the bare necessities of life.

"The actual and potential wastes in each year amount to as much as the total accumulations of wealth, and if all the possessors of accumulations were left in undisturbed possession, and the wastes of current production and use eliminated and the gain equitably apportioned according to meed and deed, no woman or child would need to do mill or factory, store or office work, no superannuated man or woman need toil, no young man need delay marriage, nor any head of a family be torn by anxiety as to the feeding, the clothing, or the housing of his dependents."—(*Harrington Emerson*.)

There are two ways of balancing expenditure against income or production: one is to increase the income, and the other is to reduce the expenditure. No man is prosperous whose income does not exceed his expenditure, no factory is profitable whose out-put is not more valuable than its expenses, and no State is great that does not produce more than it consumes. But production, out-put, income have limits. Intensive cultivation and the utmost efficiency of production can go no further than a maximum and to that maximum the civilized world must some day come. The reduction of expenditure or consumption is as yet an unexplored field of incredible vastness. The nineteenth century may be called the age of increasing production; the twentieth may eventually be known as the age of

decreasing consumption. The field for improvement in machinery tends to narrow, human effort approaches its maximum out-put and competition daily grows keener; efficiency becomes more and more essential, and efficiency means economy and cannot be obtained without the elimination of waste, whether of effort, of time, or of money.

"We can see our forests vanishing, our water-powers going to waste, our soil being carried by floods into the sea; and the end of our coal and our iron is in sight. But our larger wastes of human effort, which go on every day through such of our acts as are blundering, ill-directed, or inefficient, and which Mr. Roosevelt refers to as a lack of 'national efficiency' are less visible, less tangible, and are but vaguely appreciated. We can see and feel the waste of material things. Awkward, inefficient, or ill-directed movements of men, however, leave nothing visible or tangible behind them."—(*F. W. Taylor.*)

In the industrial world there has arisen a profession of Efficiency Engineers whose business it is to treat inefficient commercial organizations as a doctor treats a sick person. They locate the disease which prevents efficient working, the wastes which swell the expenses or hinder the production of the best and largest out-put and, having found the disease and located the wastes, indicate the best methods for their elimination. Sooner or later the spirit which has called these Efficiency Experts into being will spread to Government services and then will come a harsh day of reckoning for the incompetent and the unfit. Is it not time that we, in the Army, abandoned these deep-rooted ideas that the Army is a thing apart, not to be judged by any business standards and an organization with which the word economy can never be connected? Must we always look back to past centuries for guidance in matters of organization and administration, is it always to be a source of pride that our finance methods date from the time of James the Second and our audit system is a relic of the days when official and officer alike were 'on the make'? On the other hand, why should we encourage the idea that an officer can only be expected to train his men for, and to lead them, in war; that he must not be asked to deal in any way with the business of maintaining those men? In other words, why do we practically assert that officers cannot pay their men and that it is not within practical politics to make them financially responsible for the up keep and maintenance of their units? Is there any other branch of life where a man, expert at his job, is necessarily to be ignorant of business matters? Is a skilled Surgeon any less skilful because he can keep his accounts properly and pay his assistants and nurses correctly? Is an expert engineer less efficient because he knows the prices of the materials he uses and the selling value of the products? Is the owner of a large farm a bad farmer because he knows the value of manures and the time and place for the best disposal of his crops? It is perfectly true that the maintenance of an Army is a vast business requiring

trained administrators ; but with us, as in every large business, it is essential that business methods obtain throughout the whole concern and that everyone who has any control over expenditure or has charge of any stores or equipment, should have financial responsibility and be rewarded for economy or blamed for waste or extravagance. Efficiency is impossible without Economy—a lesson which is being learnt in many a great industrial organization to-day and it cannot be too strongly urged that most of the details of Army business are exactly similar to those in large commercial factories and in the great Railway systems. Much, therefore, is to be learnt from the methods and ideals to be found in the literature and practice of the commercial world.

Waste is not confined by any means to money, probably actual ; money is the least important item, there is waste of effort, of energy, of time, all more or less the same, and there is waste of material, but, sooner or later, all these are translated into waste of the produce of the State, either directly by unnecessary expenditure of funds provided for the maintenance of the army in peace or indirectly by loss in, or through, war.

To the Professor of Economics an Army is itself a waste so far as the general welfare of the community is concerned. The community has to labour to maintain a large number of men in the prime of life who produce nothing, while they consume food and clothing, and vast quantities of expensive produce in the form of equipment. This is, however, beside the present subject, so long as human society is constituted as at present, a military force, like a police force, is an essential object of national expenditure. But we, in the Army, owe this to the workers of the community, that we do not add to their burden by the foolish spending of the produce of their toil.

THE MAIN CAUSE OF WASTE in every Army is the retention in the service of the incompetent. In military life alone is it customary to employ men unfitted for the work in hand. The strength of an Army and of any field force is reckoned by the number of men, though many of the men will only have the value of the Chinese 'quaker' guns. If, in a strength of 5,000 combatants, only 4,500 can reach the firing line with their efficiency unimpaired, and of these only 3,000 can so fire as to cause damage to the enemy and can so move and act as to expose themselves to the minimum of loss, then it would be far better to start with the 3,000 and to save, first the money spent on the attempt at training the 2,000, and second, the food, equipment and transport consumed by them in their attempt to reach the enemy. The unfit fill the hospitals, eat up the supplies and waste the transport.

Numbers, magnitude and vastness were the ideals of the nineteenth century, the twentieth is already beginning to call for efficiency. Two centuries ago the Prussian Army organized and trained by Leopold, of Dessau, became a pattern for all Europe. Discipline was severe, training continuous and thorough, with but one aim—efficiency



in every detail. The backbone of the Army, the Infantry, was trained to the greatest possible rapidity in loading and firing. For fifty years under the stress of constant warfare and the ceaseless care of military administrators of the highest class like the Great Frederick and his father before him, the Prussian Army, weak in actual numbers of men, remained an unequalled and successful force of expert soldiers. Then came a peace of forty years with the Army living on the traditions and clinging to the methods and ideals of its glorious past, till Auerstadt and Jena broke it to fragments in one day. One century ago was born in Prussia, the modern military system, a reversion in many respects to the ways of the most ancient times. 'All dwellers in the state are born defenders of the same,' thus Scharnhorst headed his scheme and on this principle is based the military systems of all the great European powers. Numbers now form the main factor in a nation's power to protect its interests, and though every effort is usually made in the very short period of military service to turn each man into a soldier, yet the time is insufficient to make him an expert fighting man. Equipment and arms become every day more scientific and complicated, while the period of training tends to shorten and the reservist's knowledge rapidly changes to ignorance. The modern continental Army must, of necessity, contain a very large proportion of men who cannot possibly damage an enemy.

Are we on the eve of another great change in system? To what developments of the military art is science leading us? Are flying machines, automatic rifles, semi-automatic artillery, complicated sighting and ranging mechanisms, wireless telegraphy, motor traction and the numerous other adjuncts of a modern army suited to the use of half-trained conscripts or returned reservists? Is it not possible that the future will see a reversion to smaller armies composed of men trained to a complete knowledge of the work, men who can shoot, march and adapt themselves to the ever-varying conditions of a modern campaign and whose training will help them to withstand the awful strain imposed by modern weapons. The one difference from the time of Frederick the Great, apart from the individuality of the men themselves, will probably be that the Army for the future will be recruited from a population already trained in the rudiments of military work. Then will the nation only pay for men fully qualified to do its work on the field of battle.

THE SECOND GREAT CAUSE OF WASTE in our Army is to be found in the methods of administration. Our regulations are complicated, our scales of pay and allowances are unbusiness like and the system of accounts is an end in itself and never a means by which waste can be detected and efficiency obtained. There is a lack of definite and broad principles in Army management at present, and each case, however petty, is dealt with as it arises without forethought and without co-ordination. The result is an enormous amount of entirely unnecessary clerical labour throughout the service, constant waste of time and energy in all ranks and a complete absence of any

attempt at economy on the part of those responsible for the care of public property.

*Firstly, our Accounts.*—Accounts should never be looked upon as a more or less necessary evil, even by the combatant part of the Army, nor as a mystery only workable by its own high priests and essentially an annoyance to practical soldiers. In all modern large commercial organizations, accounts act as an intelligence branch and are of the greatest possible assistance in obtaining efficiency. They signal to the heads of the concern, the wastes, the hitches and the savings and with their help the whole organization is kept in the path of efficiency and economy. Accounts, in the modern sense of the word, are not confined to ledgers, cash books and vouchers, but include a definite out-put of accurate and useful data showing the expenditure, production, and progress in sufficient detail to enable the management to judge the working of every branch of the business. Our system of accounts must fulfil two conditions, it must be simple in working, so that no more money than necessary may be spent on it and so that all who are brought into contact with it may readily understand it, and it must have for its principal object, the setting before those responsible for the whole Army as well as those in charge of the various units and parts, the financial results of their work. Detection and prevention of any kind of waste should be rendered easy by the simplicity of the system and by its intelligently compiled results. Does our accounts system fulfil in any way the functions here sketched out? Is it possible to compare unit with unit and determine whether any officer commanding has exercised careful control over his expenditure? We know, for example, that the expenditure on the maintenance of equipment is enormous, and we know in a general way that much of this could be avoided if more care and attention was devoted to it, but do our accounts furnish any data by means of which proper action could be taken? Has any officer ever been rewarded for economy, has any officer ever been blamed for waste or extravagance? The answer to all these questions must be—No, and therefore our accounts system is an entire failure regarded as a help to efficiency.

*Secondly, our Regulations.*—We have a mass of literature to govern the business of the Army, but the regulations are complicated, contain so much trivial detail and are so voluminous that a mere reference to them involves an immense waste of time. An officer in dealing with matters of equipment will find it necessary to consult many works, of which the following are the more important:—

Army Regulations, India, Volume II.

Do. do. do. III.

Regulations for Magazines in India.

Handbooks for his guns and for other parts of his equipment.

Instructions for Armourers.

Handbook for Military Artificers.

### Army Tables for his unit.

Do. Miscellaneous.

Minute details regarding the shoeing of animals and of the parts of harness and saddlery which can be repaired appear in Army Regulations, India, Volume II, which volume is supposed to deal primarily with matters of discipline and other kindred subjects. This volume, it may be noted, was published in 1911, and has 154 pages of text, yet it can only be opened in eleven places where there are no corrections. Each unit has a few copies of all books of regulations and reference, which concern it, but there is no book or pamphlet available for each man in the unit from which he can learn his duty and the best methods for the care, preservation and use of his arms, accoutrements, and such part of the general equipment as may be handled by him. Much of the efficiency of any unit depends on the personal knowledge and teaching capacity of the officers and principal non-commissioned officers. The difficulties which present themselves constantly in all active military work have to be solved by the skill and thought of individuals with such aid as official books can give. But the results obtained in any unit are rarely available to assist other units in the same troubles, and the best executive intelligence has often therefore only local influence. To assist the line we should have written standard-practice instructions for each class of unit prepared by the best talent available, they should be suitable for all ranks and should deal with the best methods known for all parts of the work of the unit. They should, of course, be printed and should be in constant revision in the light of further experience by the line and advanced knowledge on the part of the Staff. For example, an 18-pounder Q-F. Battery should have a handbook containing not only a description of the equipment, but also affording information on every part of the Battery's work, such as care and preservation of accoutrements, harness and saddlery, methods of local repair of its guns, carriages and vehicles, instructions regarding care and inspection of its ammunition, simple information regarding the care, repair and use of its rifles, pistols and other small arms. There are many other details which might with advantage find a place in the work. In the coming remarks on scales of pay and allowances will be given an example of complicated regulations which shows clearly how cases are taken up as they arise without forethought or co-ordination. In such a business as ours, it is most essential for clearness and simplicity that all regulations and other literature should be dealt with by one branch ; there should be at head quarters a strong and permanent revision section with considerable authority. Not only should this section be constantly revising and bringing up to date all volumes of regulations, handbooks and tables, but all proposals involving corrections should be dealt with by it with a view to co-ordination and to simplification. The section should also have the power to initiate a review of any part of the regulations with a view to substituting broad principles for a number of detailed rulings. Its aims should

be perfect justice between the State and its servants, simplicity in regulations and system, and above all the utmost help to the service in its efforts to obtain efficiency.

*Thirdly, our Scales of Pay and Allowances.*—Pay, even in a mixed Army like the Indian one, should not present any extraordinary difficulties, yet we have a 233-page Volume of regulations *plus* a 132-page Volume of instructions and few of the pages are without corrections. It would be thought that the pay of a regimental major should be the same throughout the service, but we find eleven different rates, of which three only are in complete rupees. The pay of a non-commissioned officer in a department is made up of seven different items, all of which have to be calculated each month and written out separately in the pay-bill, and, as a rule, he loses in total emoluments on promotion to warrant rank! What a huge saving there would be in clerical labour were a definite number of rupees per day fixed for all ranks, to include all allowances, such as exchange compensation with a scale of extra pay to include all other rates of staff, command pay, etc., and to list all appointments with a number against each to show the scale of extra pay admissible. Furlough pay might be a definite fraction of pay. Again all promotions might date from the 1st of a month and in many ways the whole business of pay could be enormously simplified. Another example of complication and unbusiness-like methods is the regulations regarding detention allowances. Instead of laying down the broad and simple principle that anyone sent away from his station on duty by competent authority will receive detention allowance at so much per night of absence and fixing rates for different ranks, we find over six pages in Army Regulations, India, Volume I, devoted to lists of the various people who may draw the allowance, the circumstances entitling them to it and the conditions of the grant, together with the various rates. The conditions vary, some may get it for each night of absence, others for each day of absence, some may get it for the days of arrival and departure, others not on these days if travelling allowance is drawn, and again others not on these days when road allowance is drawn; moreover, the period for which the allowance may be drawn varies from 7 to 60 days. It may also be noted that some employes in the Army draw detention allowance under the Civil Service Regulations. It is, of course, an obvious cause for complaint that the allowance is the same for an expensive place like Bombay or Calcutta as for any up-country station.

The subject of the allowances made to units to cover their ordinary work is a large one, and it does not appear ever to have received comprehensive enquiry. A British Infantry regiment apparently receives twenty-five different money allowances:—

Office allowance to three officers—Adjutant, Quartermaster, Pay Officer.

Stationery allowance for three purposes—Musketry returns, per Company, for Interpreter.

Repair of arms and accoutrements.  
 Butts and targets.  
 Petty stores.  
 Shoeing, maxim gun mules.  
 Grinding gram for gun mules.  
 Ranges and musketry appliances.  
 Stationery and clerical, for officer in charge of transport.  
 Musketry allowance and prizes.  
 Recovered cartridge cases, etc.  
 Prizes, Regimental workshops.  
 Prizes, Army School.  
 Gymnasium.  
 School.  
 School-cleaning.  
 Library.  
 Library lighting.  
 Field firing grant.  
 Mess.  
 Band.

And in addition there are annual allowances of stores for various purposes.

Is it conceivable that any one outside the Army would attempt to maintain a body of men in this way? It would really seem as if the keynote of military administration was distrust. To a man with business ideas it would appear preferable, far cheaper and more efficient, to go in more for trusting officers in general and senior officers in particular, more especially when properly compiled accounts will plainly show up the extravagant. The business man would total the value of all allowances, both money and material, for the upkeep of the unit and offer the commanding officer a lump sum for the year as a maximum and would furnish him with priced lists of all articles which he could obtain from Government Stores. He would trust, first, the commanding officer to maintain his unit in a satisfactory and efficient condition; second, the general and other inspectors to check the work of the commanding officer; and third, to his accounts system, to compare unit with unit and to show up waste or extravagance. The saving in clerical work would be very great and there are many other obvious advantages.

A THIRD CAUSE OF WASTE is to be found in the loss of energy due to discontent, to financial embarrassment and to over indulgence in sport or games. It is essential to the prosperity of any large organization that its servants should be loyal through and through, no amount of discipline or orders will obtain loyalty. Work can be obtained by order, good work comes spontaneously from a sense of loyalty. In military life especially it is the voluntary work, thoughtful study, patient investigation, that pays the State.

Ambition may make a man do extra good work, but few men are ambitious and the ordinary man will do just sufficient work to pass muster or will do his level best according to circumstances.

Give him cause for discontent and you will certainly get the former.

*First as to discontent.*—A just and sympathetic master, makes loyal servants. Yet in how many ways does the State deal unfairly by its military servants. An officer is called upon to maintain a very varied and costly uniform which is always in a state of change. Why do we still cling to the prehistoric idea that the military profession must be made ornamental and that bright colours and lots of fancy garments are essential to the maintenance of efficiency. Moreover, the officer has to provide himself with all the implements and equipment of his trade, and these like the uniform must be of the best and bought at retail prices of the most expensive of tradesmen. Surely a radical simplification of dress is possible; no man in the twentieth century should be uncomfortable when clothed and the smartest of men is never smarter than when carefully dressed in khaki. Why cannot an officer obtain any portion of his kit on payment from Government Stores, he would pay 50 per cent. less and Government would be no loser. Frequent transfers with insufficient allowances to cover the cost are another source of discontent and many more will occur to the reader.

*Second as to financial embarrassment.*—An officer whose expenditure exceeds his income must have his mind distracted from his work by the uncertainties of his financial position and it is never to the interest of any service to have servants in such a position. Some men will always be extravagant but the vast majority of army officers are normal individuals anxious to maintain a suitable position while keeping within their means, but they find it hard to do so under existing conditions. High rentals, unnecessary social functions, ever-increasing cost of the necessities of life, extra taxation, local as well as imperial, subscriptions in aid of what are really Government functions, such as a band—all these and more fall heavily on a man whose pay was fixed many years ago.

*Thirdly as to over indulgence in sport and games.*—It is hopeless to expect from the normal man a real devotion to his work when his thoughts are entirely given up to sport and amusements, his mind in such circumstances is wasted and his efficiency must suffer. Sport and amusements are excellent things in moderation and in some cases have a direct value in increasing the individual's efficiency for military work, but the duty of an officer is to train himself and his men for war, and this cannot be done when an officer manages to devote much of the year to attendance at race meetings or when polo becomes the one and only object of his thoughts.

A FOURTH GENERAL CAUSE OF WASTE comes from unbusiness-like methods in carrying on work throughout the service. What a waste of time and of energy is caused by the assembly of three officers to constitute a court of enquiry into the circumstances under which one pair of boots have not lasted the prescribed period or when some eight senior officers gather together as a standing barrack committee to decide on the suitability of a site for a

cook house, which cook-house had already, by an oversight, been erected. Think of a Colonel of thirty years' service solemnly certifying that his demand for kerosine oil for guard-room lamps is absolutely necessary, and is made after careful, personal investigation. Imagine an officer entrusted with the charge of a large arsenal having to himself mark with his own personal stamp, each end of each piece of doosootie received into stock. How many forms are there in use which require the signature of the same officer in three places? Again what lack of foresight we come across every day in the details of army work. As an example let us consider building and repair of buildings. It is a common idea that lack of organization, of supervision or of foresight on the part of a contractor must be his loss and not a loss to the State. Is it conceivable that contractors will carry on work for Government or for anyone in which they will not make at least a reasonable profit? Any loss is bound to fall on the giver of the contract, if not immediately and directly, then inevitably in the long run. When a contractor colour washes the walls of your quarters so badly that they have to be done a second time, who in the long run pays for that? Take another case:—A large building is being erected as part of a new range of barracks, all materials are carted across the broken ground of the site—in rainy weather a mass of mud, in dry weather a foot of dust, the longer the work takes the deeper get the ruts and holes and the longer take the bullocks to draw the carts to the building. Who pays for the extra work of the bullocks and the heavier wear and tear of the carts? The cartmen?—Not much, they must get their full price or they cannot live and will not work. The building contractor?—Not likely, his rates foresee all such trouble and delay as is customary in this country. No, the State pays and could have saved the extra cost not only directly in the extra cost of carting, but indirectly in the longer time for which supervision is required, by arranging that the road which must eventually be built to connect the building with cantonments, be built as soon as the site is selected. There is a case of a very large store dépôt composed of a large number of buildings extending over a great area where the internal roads were the last item but one to be done and the connecting tramlines the last! What this cost in labour and transport for handling the stores it is impossible to say, but it was very large.

It is fairly easy to indicate the general and the main causes of waste, but it is not a simple matter to locate definite instances of waste nor to indicate how they can be removed. It must be remembered that the people, within whose circle of effort the waste occurs, are the least likely to discover it and this is most true in the Army where the vast majority of officers are honestly striving to obtain results and are well satisfied when any progress can be recorded. In commercial circles the modern efficiency expert discovers waste by the methods of the analytical chemist, he makes tests and assays in various directions throughout the

particular branch with which he is dealing and having located the causes of waste, sets to work to eliminate them by improving conditions and setting standards to be aimed at. An oft-quoted example of these methods and their results is the investigation undertaken by Mr. F. W. Taylor in the Bethlehem yards in America. He found 600 men employed in handling coal and iron ore and the company and the men were confident of the efficiency of the work done. He ascertained that the ordinary man with the shovel supplied shifted  $3\frac{1}{2}$  lbs. of fine coal or 50 lbs of iron ore at each handling of the shovel. He then experimented with loads and found that, acting on the principle of working men within their permanent strength, 21 lbs. was the best load for constant work. The next step was to design suitable shovels for the different classes of material, so that the fine coal shovel would take 21 lbs. of fine coal and the iron ore shovel, 21 lbs. of iron ore. He also ascertained, that, for good work, a certain definite period of rest was necessary after a certain period of work. The net result of his investigations and of the remedies he proposed is, that now 140 men with three experts as teachers do the work formerly done by 600 men, each man gets more pay with less effort and the Company saves 75,000 dollars a year. It will be noticed that the improvements were in two directions, one in improving the conditions for the man, and the other in designing the best implements for the purpose.

It will be interesting to consider whether a similar method of scientific investigation could not be profitably employed in military work.

Has the vital subject of marching, ever been investigated in a scientific manner? Our army is composed of a large number of different physical types of men and their carrying and their walking powers must vary considerably. When marching under a load there is, for the attainment of the best results, a definite period of marching alternating with a definite period of rest. There is also the question of pace, certain physical types can obtain better results with a quick pace, others obtain a maximum at a slow rate. Again, there is the question of the load and method of carrying it. All these details are capable of scientific investigation and the results to be hoped for would be, increased marching power, knowledge by the staff of the marching power of each class of unit, ability to brigade units of the same marching power, increased efficiency of the men at the end of a march.

Proficiency in the use of the rifle is obviously of the highest importance and there is much in connection with musketry and the use of the rifle generally which would repay investigation. From the musketry returns of a number of British regiments for three years, the following facts are taken:—

In the classification practice 345 points is the maximum and in sixteen complete records, the best is 223 or an efficiency of 64.64 per cent., the worst is 188 with an efficiency of 54.49 per cent. The best were stationed at a place where the ranges were said to be bad.



The highest efficiency was connected with a total expenditure of 225 rounds per man, while the lowest expended 289. The best company's average was 238 or an efficiency of 69 per cent. The best regiment had 57·68 per cent of marksmen, 31·42 per cent. of 1st class and 10·9 per cent. of 2nd and 3rd class shots and men who did not fire or complete the course. Thus with every condition favourable to the men, only a little more than half, showed any real proficiency in the use of their weapon. Surely a real expert attached to a regiment would be able by practical and individual teaching to obtain better results than this. A College Professor to be efficient must not only have a most complete grasp of his subject, but he must also be able to impart his knowledge to others and, to be able to do this, he must know the difficulties that obstruct the learner's mind. To have passed through a musketry school does not necessarily mean that a man has become an expert in knowledge of the rifle and its powers, nor that he has learnt to overcome the difficulties of ranging and sighting and, above all, it does not at all imply that he has become qualified as a teacher.

To obtain the best results from any body of men armed with a rifle, it is essential that instruction should be imparted to one and all by the best procurable talent and hardly any cost would be too great for such talent considering the enormous waste of ammunition, with resulting wear in the rifle, which takes place in peace and the still more colossal waste which occurs in war.

Government Factories, Arsenals, Supply and Store depôts closely resemble in their work various commercial concerns and their system of management and account can follow closely those in use in the more modern private organizations. The main principle is to treat them all as working on a money basis, to subdivide their accounts so that the cost of any part is known and recorded against the men responsible for the works of that part, and to compare results, part by part and year by year. In a large Government storage establishment the cost of the daily paid workmen and labourers was Rs. 1,05,000 in one year. To a large extent modern commercial methods were then instituted, every detail of expense was scrutinized, handling methods improved, financial responsibility of the men in charge of each branch insisted upon and conditions generally standardized, with the result that the cost for the following years was Rs. 52,000—an improvement of 47 per cent. This was an exceptional case; but similar methods would have similar, though possibly somewhat smaller results elsewhere. Clerical labour is admittedly excessive in this country, but no effort has ever been made to thoroughly investigate the subject. It is mainly due to complexity of rules and regulations and multiplicity of forms and documents; but it is also partly due to the extraordinary number of holidays allowed. A typical case shows only 265 full working days in the year, there being 52 Sundays, 13 other Christian holidays, 23 Hindu and 5 Mahomedan holidays, while Saturday not being a full working day accounts for the balance. As each clerk can also

obtain 15 days' casual leave and one month's privilege leave, it follows that in a year he usually gives only three-fifths of the days to work. Rather different to the clerk at home with his six bank holidays and his fortnight's leave besides Sundays. Still even allowing for this, much could be done to reduce clerical labour if earnest effort were made in each branch of the service and if clerks were taught some of the rudiments of office methods and business ways. It would pay every department to have a small training school for clerks where their young apprentices and junior clerks would be taught letter-drafting, précis work, filing and simple accounts, be given some insight in the technical nature of the department's work and have imparted to them some business ideas. The following is a typical example of unnecessary clerical labour and waste of time:—An officer in charge of a large Government factory whose annual grant for daily paid workmen alone exceeds six lakhs of rupees is not allowed to pay for any stores exceeding ten rupees in total value. He must pass the bills and send them to the accounts department, where the arithmetic is checked and the amount forwarded to the supplier. This involves clerical labour to the State and considerable delay to the contractor. Why officers in charge of all such establishments cannot be disbursing officers and pay suppliers direct and immediately after receipt of the goods is unknown, their responsibility would be no heavier than at present and there is no question which is the more business-like procedure.

The Army maintains a very large permanent transport establishment, yet it incurs annually a considerable bill for carting charges. It would be interesting to know whether the capabilities of the Government mule and bullock have ever been scientifically tested, and also what number of maunds have been carried and what mileage has been travelled on an average by each cart in use at each station. The ordinary bullock cart owner is hardly a model of efficiency, yet the average private bullock cart does far more work than a Government cart. It is stated that, in the cotton districts, two bullocks will usually take 1,400 lbs. of cotton with fodder and gear, thirty miles in the twenty-four hours, rest one day and return the next with another load, possibly of grain. The Government cart is not allowed to take more than 800 lbs., but rarely takes that and can seldom be got, in station work, to go more than a very few miles in the short working day. Make an assay in the cost of transporting stores in some of the large military stations, it would not be difficult, compare them one with another and some startling figures would be obtained.

The cost of the maintenance of the equipment of any service unit is very great, and it is obviously to the interest of the State that this should be kept down to a minimum consistent with serviceability for war. Equipment, in the present day, is very varied and often of a most complicated nature and to keep it serviceable without unnecessary expenditure on replacements entails a considerable amount of care and forethought on the part of the

officers of the unit. It is true that a certain number of expert tradesmen are on the strength of most units and on their expert knowledge much depends; but it is absolutely certain that without the personal attention of the officers and some knowledge on their part, and without care and attention from the men who actually use and handle the equipment, the expert knowledge of the artificers will be useless. An investigation into the cost of replacement of condemned equipment in one year in one circle of supply has provided the following interesting figures. In accoutrements, the cost for one British regiment was Rs. 103, while in another it was Rs. 1,075, in one Indian regiment the cost was Rs. 188, in another Rs. 1,997. In harness and saddlery the cost per horse in one field battery was Rs. 5-10, in another it was Rs. 31-5; in a mountain battery it was Rs. 14-14 per animal, against Rs. 68-3 in another similar battery. We may safely assume that conditions varied in the different units and to make the comparison complete, we should know the dates of original issue and the annual expenditure on replacements and on repairs since; but the figures are sufficiently startling to show that a system of accounts which would give such data annually, would provide the heads of the Army with a most powerful means of ensuring economy and therefore efficiency. Not only does careless use of equipment entail unnecessary expense, but it also means that the unit in which it occurs is not in such an efficient state for immediate service as a similar unit in which every possible care is taken. These figures also prove that scientific investigation is necessary into the methods of care and preservation, the scales of allowances of material and the knowledge of, and work done by, the personnel of each unit. It is known, for example, that harmful substances are frequently used on leather work in order to obtain a high polish. We know that articles are often condemned solely on account of their appearance or that could be repaired locally. We know that lack of care and attention to wheels and vehicles will rapidly accelerate their becoming unserviceable. We know, in fact, a good deal in a general way to show the enormous field for economy; but the absence of definite data provided by a business-like system of accounts means that we have no lever with which to work on the unit.

Is there any limit to the field in which investigation into methods and conditions would not be profitable? Is there any branch of the service that would not be the better for it? There is no intention here of hunting for scandals, the sole object is to prune the whole system of the hampering matter which has grown round it in the course of centuries. The executive cannot see the waste going on around it, it is too close and too much engaged in trying to get results; independent investigation by experts is necessary, though co-operation by the executive is essential. Promise them freedom from all unnecessary work, guarantee them from waste of effort and waste of time, while insisting on economy, show them how efficiency will result and there will be little fear of lack of co-operation. "The

ideal that inspires the formulation of the principles of efficiency is elimination of waste." We may safely assume that all officers in the Army are keen on efficiency, that being so, they may be trusted to welcome any investigations that have for their object the elimination of waste. To the State we can promise greatly reduced expenditure with a higher level of efficiency throughout its military service. The keynote of administration should be simplicity ; simplicity is as essential to economy in peace as it is to efficiency in war. Natural conditions in India are all in favour of military efficiency ; but the artificial obstacles set up by unbusiness-like administrative methods and by unchecked waste have an enormous counterbalancing effect. The remedy is scientific investigation into every detail, applying to every item of the work, the touchstone—how does it help us to obtain efficiency ?



## DOGS IN WAR.

BY MAJOR E. H. RICHARDSON, LATE SHERWOOD FORESTERS.

I gladly avail myself of the invitation to contribute an article on the above subject more especially as a good deal of misunderstanding exists as to what dogs can really do, and have, in fact, done to assist the soldier in warfare. Years ago it was borne in upon me that the hearing of a dog greatly excels that of man and added to this the dog has besides, the power of scenting,—a faculty almost entirely lacking in civilized man. It struck me that these two qualities should certainly be of extreme value to the soldier who is so often surrounded by such difficult and dangerous conditions, as to require every possible means for detecting the presence of the enemy. To the Germans, however, must be given the credit of first adopting any definite system of training, and, in order to gather the fullest understanding, I first went abroad and went through their training establishments, and made the fullest enquiry into the whole matter, before experimenting on my own account. That was many years ago, and during all that time, I have never ceased to work in the matter; the movement has also spread to many other countries in the meantime.

Before going on to the duties of the military dog, I might mention my conclusions with regard to the most suitable breed. Living in Scotland, as I was at that time, and having under my notice constantly the sagacity and capacity for work of the Scotch Collie, my experiments in the first place commenced with this breed. That they were excellent and capable of their military duties was certainly the case, but as time went on and I began to test them in various climates, I found that their heavy coats made them quite unsuitable for work out of temperate zones. I tried many breeds of sporting dogs, but the instinct for game is very difficult to eradicate, which interferes considerably with proper service. When speaking on the subject of the right breed to use, I find numbers of advisers are always ready with suggestions. Every one thinks that he knows the very dog that will do it, Poodles, Bull terriers, Great Danes, etc., etc., are all suggested, but when the qualifications necessary in the military dog are enumerated it will be seen that the field is considerably narrowed. Intelligence, acute hearing and good scenting qualities are essential, an extremely hardy disposition in any climate, size to stand long marches and sufficiently tall to go through long grass, weather resisting and not too heavy a coat, and as far as possible no game instinct. Another very important point is that the price of the dog in the raw must not be high, as where a large number of animals are required the purchasing cost of each one naturally cannot be very much, and thus a

certain number of breeds qualified in other ways are unsuitable on this one but most important point. After giving the matter lengthy consideration, I find it advisable to confine myself as much as possible to Airedales no,—not the show type, but especially large and heavy specimens. These dogs possess all the qualifications necessary, such as hearing, scent and intelligence, and they are most extraordinarily hardy. I have sent them to every part of the world and they seem to accustom themselves to cold and hot climates with equal adaptability. As a breed they are not expensive.

*Sentry Dogs.*—The most important assistance the dog can render the soldier is that of sentry duty. Recent campaigns have shown that attacks either take place at night or troops are moved up into position under cover of night for attacks at dawn. Thus it will be seen the increasing importance of discovering the intentions of the enemy and the correspondingly difficult task of doing so in the darkness. This is where a good sentry dog is of such immense value.

The dog will hear the approaching step of the enemy's scouts or scent a body of men in the distance long before the human sentry is aware of any one being in the neighbourhood at all. The darkness is to the dog no difficulty; but, on the contrary, it works better at night than in the day time. From countless experiments I find that the hearing of the dog is incredibly keener than that of man, and another point which makes for greater security is the extraordinary alertness of the dog at night. Where the human sentry, already tired out perhaps by a long day's march, or debilitated by a lengthy arduous campaign, may have his senses dulled, or be tempted to take forty winks at his post, the dog at all events is never so awake as at night. His senses are all at fever heat, and the increased dampness of the air and the stillness assist his scenting and hearing powers.

The dog will also show far greater discrimination as to the character of any sound heard in the stillness and blackness of the night than a man. At times, the soldier, his nerves all on edge from "the terror by night," will be led to fire his rifle in blind haste at some perfectly harmless sound which his excited imagination has misconstrued into an approaching danger. The dog, on the other hand, with his keener perception, will distinguish between the crack of a branch trodden under foot and that of one broken by the wind, or the rustle caused by a body of men stealing through the grass and that resulting from the swaying wind. In fact the presence of the dog with a sentry will cause the latter to be of infinitely more value, will prevent him getting absent minded and drowsy, and in the case of a nervous man, will give him confidence and reliability. It is my absolute conviction that, were all regiments in peace-time supplied with some good sentry dogs in the management of which the sentries could be trained in time of war, the appalling results due to rushes and ambushes could be reduced to a minimum.

*On the march.*—When on the march the advance and flank guards should be provided with dogs, and at the bivouac these

should be distributed among the sentries, while where the troops are entrenched the dogs should be placed in the trenches or in front of the wire entanglements.

The scouting parties will find it useful to take dogs with them and they can also be usefully employed for guarding communications in the rear, and also bridges, tunnels, provisions, etc., etc.

*Selecting Dogs.*—It might be thought a fairly simple task to select a dog suitable for all these guarding duties, and without knowing any better, any one might imagine that all that is necessary is to procure a good ordinary watch dog and put him on duty—in fact, that any animal that has been acting as a good guard to some farm or back door should make a good sentry dog. *But such is not the case.* A dog that is the most determined guard and sentinel at its own house or kennel is often quite useless when put out on sentry duty in the open, and moreover cannot be trained.

For this reason, a considerable amount of experience is necessary for the selection and training of the dogs. I find that Airedales, as I have already stated, possess most of the qualifications necessary. Sometimes a cross with an Airedale is good, but in all those I have sent to different parts of the world of recent years, the Airedale predominated.

The finished sentry dog, apart from the necessary qualifications of scenting and hearing, must be one that will do its work in any country, and in any spot, and with any stranger, to whom it may be served out.

*Preparation in peace-time.*—For the reason of the careful selection and training of the dogs necessary, it will be seen the wisdom of carrying out this work in peace time, and drafting the dogs to the various regiments, so that not only may the dogs get to know their environment, but also the men may become accustomed to handling them.

*Ambulance Dogs.*—Another service which the dog can render to the soldier is that of assisting in locating the wounded, after a battle. Much of the gathering in of the wounded in recent campaigns has had to be done at night, owing to the heavy firing during the day, and then lights have had to be avoided for fear of drawing the enemy's fire. Thus the difficulties of the searchers and stretcher bearers have been frequently insurmountable, and large numbers returned as missing have been the result. Here again the dog's scenting powers are of good service, and where in the darkness an unfortunate wounded soldier, driven by the dangers of modern shell fire to take every possible cover, may be lying under a hedge, or in some ditch too weak from loss of blood to call out, is frequently passed by the searchers, the dog would, led by the wounded man's body scent, and by the smell of blood, indicate his presence.

#### RECENT CAMPAIGNS.

In the Russo-Japanese War a few trained dogs were presented to the Russian Government by Germany and by myself.



Count Persidsky, of Count Keller's staff, writes:—"In finding the missing and wounded, with which the millet fields are strewn, nothing succeeded like our pack of seven dogs. The English ones are especially intelligent. In our last engagement 23 men were found in unsuspected places."

The entire trans-Siberian railroad was guarded by dogs, and to their aid, greatly may be ascribed the reason that it was never cut. The Japanese also often used dogs as scouts on long leads.

In the war in Cuba, Captain Steel, of the American Cavalry used a dog called Don, and he asserted that it was owing to this dog's service that no detachment with which it went was ever ambuscaded. He says, "Dogs are the only scouts that can secure a small detachment against ambuscade in these tropical jungles. The bush is so dense and the trails are so crooked and over such rough territory, that the leading man at one or two hundred yards is out of sight of the main party. The insurgents lying in ambush often let the leading man pass by and open with a volley upon the wagons and main party of the escort." This dog Don went through the entire campaign; lived for more than a month on scraps of bread and bacon, and during a day covered six times as much ground as any man of the column.

In the German South-West African War the mistake was made of hurriedly collecting large numbers of dogs at the last minute, and sending them with the troops. These were, in most cases, without any training, and were selected by insufficiently experienced persons, so that many were quite unsuitable for the work and climate. Those which were properly trained and handled gave good results, and Sergeant Kranholt gives his experiences as follows:—

"At the outbreak of the disturbances in South West Africa I was serving as Sergeant of Police at Eisleben. I was called up as a reservist, and posted to the 1st Regiment of Field Force.

By order of the War Office I took two dogs, one of which I had for police duty and another the present of the German Sheepdog Society." (These of course, would be highly-trained dogs) "After landing at Swakopmund, I was sent with the dogs immediately to the interior.

"In spite of the long journey, want of exercise, change of climate, long periods of want of water, the stony ground and sharp grass, my dogs were, with the exception of a few days, always fresh and ready for work, and always on the alert. The opposite happened with other breeds which were employed for service. The majority had the pads of their feet cut after the first few marches, and had to be put in luggage wagons. I handed over one to First-Lieutenant Bahr, of the 10th Dragoons, whose duty it was to clear the country of straggling Herreros. This dog accompanied him in all his expeditions and proved himself entirely reliable and useful, and was always in good health.

"As sentries the dogs did excellent work in occupied posts, at wells, cattle posts, and such like, and prevented many surprises and stealing of cattle.

"It must be absolutely laid down that dog's feet are absolutely hard, and that they are accustomed to work all day, otherwise they are useless."

Captain Hinsh, Headquarters Staff, reports his dogs are a great protection to the column to which he is attached. Lieutenant V. Doring, 19th Dragoons, in the same campaign, also stated his dogs have given excellent results on patrol, in action, and in camp, and on the march.

#### ABOR CAMPAIGN.

It was owing to the initiative of a lady that a pair of dogs, accompanied the force sent against the Abors last winter. Mrs. Alban Wilson, wife of Major Alban Wilson, of the 8th Gurkhas, obtained permission from the commanding officer and from the general commanding the expedition to present two dogs, purchased from me, to her husband's regiment. "Bob" and "Jumbo" were late in getting out to India, and were only just in time to catch the regiment before it began its march, and they were therefore completely strange to climate and men, and had also had a most terribly trying voyage in the hottest season of the year. They settled to their work, however, and the correspondent with the expedition sent the following dispatch, which appeared in the London Press on November 11th, 1911 :—

"Before the encounter of November 7th, one of the dogs accompanying the advanced guard gave timely warning of the presence of Abors. The dogs are also employed at night time, being used by the Gurkha sentries, who keep them on a chain to supplement their own vigilance."

On another occasion the dispatch sent was as follows :—

"The expedition has now reached Rotung, a gathering place of the Abors, which was found to have been burned. After marching unopposed to the limit of the made road, the striking force began the ascent of the rising ground beyond the Lelek river, through a thick bamboo forest.

"Information had been received to the effect that a stockade might be met with, and the Gurkha scouts, who were accompanied by Major Richardson's war dogs, were accordingly ordered to keep a sharp look-out.

The dogs again proved their efficiency, as they gave warning to the outposts of the presence of the enemy's scouts before they were seen by the Naga coolies."

In a private letter written to me by Major Wilson, under whose supervision the dogs were on the march, he says :—"My dogs never once failed to give notice of an enemy on the path, with the result that the advance guard or main body was never ambuscaded."

At the time these dogs were on their march through the Indian jungles, the Turco-Italian war broke out, and I went out to Tripoli to study the war from my particular point of view. I at once saw the immense advantage to be gained by having the

trenches and outposts guarded by dogs against night attacks. Returning to Rome, I represented this at the War Office and the idea was adopted and large numbers of dogs were sent out. There were eventually over 500 dogs at the seat of the war. The Italian Army had no trained dogs, except a few stationed in some of the forts, but fortunately they were able to obtain those belonging to the Customs House officers, which were kept to prevent smuggling on the Austrian frontiers. These were well trained and were sent with their keepers, who thoroughly understood their handling, so that excellent service was rendered.

These dogs were of the Ristone or Spinone breed, with a good deal of cross in them. They are of medium size, of black or brown colour, and with silky hair, and are very intelligent, and have excellent noses. They were used with the cavalry as scouts for tracking out hidden Arabs in the oasis, and as aids to the nocturnal guards and advanced outposts, 500 to 600 metres beyond the trenches and by the barbed wire entanglements. The infantry also found them useful for finding hidden ammunition. So useful were they found to be that larger numbers were sent for, and as there were no further frontier dogs to be had, a collection of those dogs used in other parts of Italy was made, namely, of the big shepherds' dogs from the Maremma. These are large powerful dogs with shaggy coats. They are excellent guards and watches, but they are very fierce, and not nearly so well trained as the Customs dogs: therefore, although these big fellows did good service in guarding the trenches, they were not nearly of the same use as were the other dogs, and could not be handled so easily. In fact, the point was strongly brought out, of the advantage of having men trained in peace-time to understand the working of the dogs, as on this rests half the success, as well as having the dogs properly trained. I have remarked that the Custom House officers went with their own dogs, and that there was perfect understanding between dogs and men, while the sheep dogs hurriedly collected and without any special training, were among complete strangers, without sufficient understanding to know how to use them, and thus many were failures.

The following is an account of the battle of Derna :—

"In the early part of the evening of February 11th-12th, the Turks, under cover of darkness, advanced in two columns against the Italian position at Derna; one column of about 500 men to the right, the other consisting of about 1,000 Bedouins, with a stiffening of Turkish officers. The whole of the country is difficult in the extreme, without roads, and crossed by a series of tracks for the most part known to the natives only, running on the edge of precipices. This force took every advantage of the sinuosities of the ground and practically crawled undisturbed to the Italian position. The alarm however, was given by the dogs chained to the entanglements, and at 1.30 an engagement began at this point which lasted the whole night."

In the present Balkan campaign, I went out to investigate the matter.

The Bulgarians, Servians and Greeks used dogs with different regiments most successfully for preventing night surprises, also for guarding lines of communication and bridges.

#### PROGRESS AT HOME.

The idea has hitherto received little support in England, and it was therefore a gratification to me when a request came from the men of the Norfolk Regiment for one of my dogs. I had the greatest pleasure in presenting them with one, which worked with them through the manœuvres this summer. I have the following report from the officer of the company, to which it was attached :—

"I beg to forward a report called for on the value of the dog presented to my company by Major Richardson. The dog, an Airedale terrier, arrived just before Brigade Training. Major Richardson forwarded full instructions as to its care, feeding, and training.

"On three occasions I had the opportunity of using the dog on outpost duties at night. Each time I found the presence of the dog to be of the greatest value. He either remained beside the sentry or went with a patrol.

"His value consists in the fact that he can and does detect the approach of human beings some considerable time before the eye or ear of the average man can distinguish anything. The result is that the sentry or patrol is fully on the alert, and it is impossible for them to be either ambuscaded or 'rushed.' The dog is no expense, as he feeds on the remains of the men's dinners. He is never allowed to run loose in camp or barracks, and no one is allowed to feed him except the man in charge of him.

"I am of opinion that it would be a very valuable asset to have four of these dogs attached to every infantry battalion for service in the field.

"I hope at next company training to make more extensive trials of his usefulness. I should add that his method of indicating the approach of anyone at night is quite silent. It consists of a low growl and a stiffening of his body almost like a pointer.

"Captain Temperley, of the Norfolk Regiment, also testified on a later occasion that he could not speak too highly of the dog. He had tested it many times, the last occasion being the last night of the army manœuvres. The 1st Division was encamped not very far from the Blue Army, and his company was on outpost duty. The dog remained with the advanced sentries the whole night; they were on a public road, and the enemy were not very far away. He found that the dog invariably let the sentry know of the approach of a human being two or three minutes before the sentry could tell that there was anybody about. That he (Captain Temperley) considered the greatest value, because it meant that no sentry and no picket could ever be surprised as long as there was a dog there. When they remembered all the regrettable incidents in the South African

War due to surprises at night, he thought that infantry officers in particular would feel very much greater confidence if they had dogs in the picket line. The misgivings that he had felt at the beginning were, he found, quite falsified, because he was lucky enough to spot the right man to look after the dog. The dog had not lost his keenness, and the men of the company took care that nobody else fed the dog but the owner."

I am glad to say that recently I have been asked to supply dogs to two or three other English and Scottish Regiments.

To speak of the work that is going on in foreign countries:—

*France*—There is a training establishment at Fontainebleau built by the French Government and a large number of dogs are used for outpost service with the Chasseurs and Alpine Regiments and are a great success out in Algeria and Tunis.

*Germany*.—In Germany they employ dogs in guarding the fortifications and frontiers, but a very important point is that the organization of police dogs in the country is very large and perfect, and a scheme exists for the mobilization of all these dogs for use with the army. Their training, which is brought to a very high state of perfection with the police, enables them to be good scouts and guards and to be good trackers.

*Austria*.—In Austria they are used on the Italian frontier and in Bosnia and Dalmatia. The Alpine Jaegers, Kaiser's Jaegers, the regiments in the Tyrol, and the Bosnia Herzegovina Infantry regiments have large numbers of dogs among them. Airedales are used to a very great extent as well as the native sheep dogs. The results are excellent. There is a training school at Wels, in Upper Austria, and also at Seraievo. In Austria they also train large quantities of police dogs.

*Belgium*.—In Belgium dogs are used as sentries with several of the regiments, including the carabineers; they are also used for dragging machine guns and for ambulance dogs. In the event of war, the Belgians, who have a perfect system of war dogs, would supply the army from the police.

*Holland*.—The chief interest in Holland is in ambulance dogs, some of which I have supplied myself. The ambulance dogs are with the Grenadier regiments quartered at the Hague, and lately there has been a training school established under the presidency of the Prince Consort of the Netherlands at the Hague.

*Sweden*.—They have very good systems of dogs, both for sentry and ambulance work, and trials are held periodically at Stockholm.

*Russia*.—A number of regiments have dogs for sentry work. One regiment, the Hussars of the Imperial Guard at Tzarskoe Selo (the camp outside St. Petersburg) has now 28 Airedales. They have also dogs for ambulance work and the numbers are increasing daily.

*Bulgaria* has a most excellent system of military dogs. The whole frontier is guarded by these dogs, and they are with the pickets and detached posts, and in the recent war have been frequently used by the allies to prevent surprises and ambushes.

I hope in the foregoing I have placed in a clear way the advantage to the service of employing properly trained dogs. For scouting and sentry work and for searching for the wounded the natural qualifications of the dog are such, that he is an invaluable auxiliary to the soldier, and in view of the fact that foreign armies are all likely to adopt this aid in time of war, we ourselves cannot afford not to do so also. The advantage of a scout or sentry provided with a keenly hearing and scouting dog over one without, is so obvious as to need no further comment.

That it would be found to be an absolute necessity to provide our troops with dogs at the eleventh hour, is, I am convinced, a certainty, and as I have already said, this hurried collection does not answer, and is a most wasteful and expensive method.

The only safe way is to provide regiments in peace-time with properly selected dogs.

In this country we would have no customs or police dogs at all to fall back upon, and therefore the army would require to train its own dogs.

This could be done at a training establishment, and from there the dogs should be drafted to the various regiments. They could be used in peace-time, as is done abroad, with the sentries in forts, aeroplane sheds, magazines, etc., and by their use reduce the number of sentries required.



# A "LONG VIEW" OF THE MIDDLE EASTERN QUESTION.

BY LIEUT. T. C. FOWLE, 40th PATHANS.

"In order to efficiency in action, whether in personal or corporate life, we have to recognise the coincident necessities of taking long views and of confining ourselves to short ones."—" *The Problem of Asia* " by Captain A. T. Mahan.

## INTRODUCTION.

In foreign politics of to-day the "short view" receives adequate attention. The changes in political situations all over the world are ably chronicled day by day in the Press, are discussed month by month in the reviews, and at greater length are disserted in the various books on foreign politics which appear every year. But the "long view" in the meanwhile seems to be somewhat neglected, and it is this comparative want of attention which the long, as compared with the short, view receives, on the subject of "The Middle East" as elsewhere, and the equal importance of the former with the latter, which must form an excuse for the present article. It contains nothing new, nothing which has not already been better said by others better qualified to speak,\* but as it forms a short précis (as it were) of a long and complicated subject, perhaps it may be of some interest to the casual follower of (not the expert in) Eastern politics.

## GENERAL REMARKS.

"The Middle East" has been defined as "those regions of Asia which extend to the borders of India or command the approaches to India, and which are consequently bound up with the problems of Indian politics as well as military defence." Thus it would include countries such as Syria and Palestine; in so far as they command the Suez Canal, Persia, with the Persian Gulf, Central Asia. Afghanistan, the states on the North-East Frontier which separate India from China, and China herself in so far as she is connected with the safety of India. An enormous extent of country which, even from the long point of view unconcerned with minor details, can only be discussed very briefly in the limits of a single article.

When considering "The Middle Eastern question"—or for the matter of that almost any Asiatic political problem—there seem to be three broad principles or laws which must always be borne in mind:—

- (a) *The paramount importance of the safety of India from foreign aggression.* No other consideration of commerce, or temporary expediency, or sentiment of any kind, can be allowed for a moment to outweigh this vital point. This principle may seem to be the veriest of platitudes, but nevertheless it appears to be forgotten sometimes.

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\* Captain Mahan in "The Problem of Asia," Sir Valentine Chirol in "The Middle Eastern Question," Lovat Fraser in "India, under Lord Curzon and after," etc, etc.



- (b) *The tendency of all civilised states to expend when brought in contact with uncivilised states. The whole history of the West in the East for the last 150 years proves this beyond contradiction.*
- (c) *The absolute necessity to Russia of gaining fresh access to the sea.*

As Captain Mahan says: "It is abundantly clear that Russia can never be satisfied with the imperfect, and politically dependent, access to the sea afforded her by the Baltic and the Black Sea." And this is as true to-day as it was twelve years ago. In fact it is a great tribute to the far-sightedness of the American strategist, and a proof of the permanence of the "long view" that "The Problem of Asia" should still remain a standard work on the subject it deals with.

Important changes have of course come over the international situation since "The Problem of Asia" was written. Captain Mahan in his grouping of the nations, according to their interests, places Great Britain, Germany, Japan, and the United States on one side, and France and Russia on the other. The situation nowadays is that Great Britain, France and Russia are combined to resist the growing might of Germany, assisted by Austria and Italy. But nevertheless the fact remains, that this change has been brought about by the trend of events in Europe, and not in Asia, and that in the latter continent, Russia and England still face each other as rivals—perhaps as friendly rivals, but certainly as rivals.

#### COMMUNICATIONS.

With reference to the positions of these two powers (Russia and England) in Asia, the immense superiority of the Russian position is at once seen by a glance at an atlas, Russia extends a homogeneous mass from the Black Sea to the sea of Okhotsk, a single empire under a single autocratic government, dominating or conterminous with many of the important countries which go to make up "The Middle East." India, on the other hand, which represents the British Empire in Asia, stands an isolated outpost separated from the British Isles by some 6,000 miles of sea. Russia's communications with the Middle East run entirely in her own territories, and to all intents and purposes are safe from attack. Our communications run over that no-man's land—the sea, can be seriously threatened at more than one point, and are only safe so long as our fleet is proportionately strong to those of other powers.

Thus the first factor in a "long view" of the Middle Eastern is that of communications.

There are two lines of communications from the British Isles to India; one *via* the Mediterranean, the Suez Canal, and the Red Sea; the other *via* the Cape of Good Hope. The former is by far the shorter, the later the safer in time of war. The insecurity of the former under certain eventualities does not need much demonstration. It runs first through the narrow Mediterranean Sea, flanked by powers who might or might not be our enemies in war,

and then through the narrow and very inadequately defended defile of the Suez Canal. When Captain Mahan wrote "The Problem of Asia," this route had the further disadvantage of being commanded by a more or less unfriendly France. This hostility has since happily turned to friendship, and so an obvious defect has been removed from the use of this line of communications.

But there still remain some grave drawbacks to this route, and in this connection the importance of Turkey in Asia looms large. Captain Mahan puts the case very clearly when he asks us to imagine this part of the world, *i.e.*, Asia Minor, Syria and Mesopotamia, as not under the rule of the Turks, but forming a strong modern state, with a properly organised army and navy. "This imagined state," as he points out, "touching the Black Sea, the Persian Gulf, and the Levant, would control the issues from vast territories to the outer world;" and it would of course absolutely dominate the Mediterranean-Red Sea route to India.

Almost certainly, one of the results of the Balkan War will be to increase this importance of Asia Minor. After the crushing blow which Turkey has received, it is at least doubtful whether she will be able to keep her hold on her Asiatic possessions, peopled as they are by Arabs, Kurds, Armenians, etc., who are all more or less bitterly hostile to Turkish rule. A final, though not necessary immediate, break-up of Turkey is quite possible, in which case the important question will arise as to how this territory is to be divided up between the European powers, more especially between Germany and Russia. Needless to say, any such division of Turkey's Asiatic possession will be of vital moment to the safety of our possessions in the East.

Having considered the all-important subject of communications, we now come to the region of the Middle East itself.

#### BUFFER STATES.

The ideal situation for India—as far as external relations on land are concerned—would be a circle of strong, independent, but friendly, buffer states. (As far as her sea-frontiers are concerned, of course we only hold India so long as our navy holds the sea.) And it is this ideal situation of a ring of buffer states that has been the aim of Indian foreign policy ever since our power in India assumed enough importance to have a foreign policy at all. Moreover, up to the present time this ideal has been approximated to in a far greater extent than is the case with many political aspirations. Against our great rival in Asia—Russia—we have had in the west Persia and Afghanistan; in the north, the mountainous regions which form the boundaries to Kashmir, while all along our North-East Frontier from Gilgit to Assam there lies a fringe of small, independent, or semi-independent, states.

But this situation is slowly but surely changing for the worse as far as British power in India is concerned. Nine years ago Lord Curzon, in a speech quoted by Sir Valentine Chirol in "The Middle Eastern Question," pointed out how hostile or possibly hostile

influences were creeping up to our frontiers. No one can say that this situation has altered for the better since 1903, nay more, can anyone deny that it has not grown considerably more critical ?

Nine years ago the internal condition of Persia may have been deplorable, but she had at any rate the semblance of a Government, and her soil was free of foreign troops. To-day civil war, anarchy and wholesale brigandage are rampant (as the writer can vouch for, having lately returned from six months in that country), and both Russia and Great Britain have been compelled to send in troops for the preservation of the lives of their subjects, and the protection of their interests. Further, there seems no reasonable prospect of any radical reform in Persia being effected by Persia herself, which means that delicate operations will have to be undertaken by the two foreign countries most concerned, *i.e.*, Great Britain and Russia. In which case what action can they take which will not gradually increase their political responsibilities in that country, and perhaps finally cause their frontiers to run conterminous to each other ?

Afghanistan, fortunately, still remains independent in fact as well as name, but there are not wanting signs of possible, and important, internal complications. It is no secret that there is a strong religious party which is more or less hostile to the Amir. There is always too the great difficulty of keeping the army contented and loyal, now that times of peace have come. The army of a Western state may exist as an insurance *against* war ; the army of an Eastern one exists solely *for* war. The late Amir used his armies for the extinction of rival claimants to the throne, for putting down the rebellions of unruly tribes, and for the subjugation of the infidel Kaffirs. The present Amir has not these outlets, and trouble may ensue. A weak and divided Afghanistan—racked by civil war—might lead to even more serious complications than present themselves now in Persia.

On the East an entirely new state of affairs has arisen in the shape of the North-East Frontier. The North-East Frontier has of course always existed, but it is only of quite recent years that it has acquired its present importance owing to the rise (or supposed rise) of China as a modern power.

The North-East Frontier has, from a broad point of view, a certain resemblance to that on the North-West. In each case there is the fringe of independent territory, and beyond a large and possibly encroaching power. But it is in the matter of this power that an all-important difference lies. There can be no two opinions as to the vast military strength of Russia, though opinions may differ as to the precise quality of that strength. But these many opinions as to whether China has, or ever will have, any real military strength at all, that is to say strength to be a menace to India from the East, as Russia is from the West.

Disregarding minor differences, the two views on China at the present day, views which are each held by authorities well qualified to speak, are : that China will become in a comparatively short time a

first-class modern power, and as such with the millions of people at her command, and with her extraordinary natural resources, she will dominate the whole of Asia, India of course included. The other view is that China will break up (as the expression is) and be parcelled out among the European powers.

But the important part to recognise is this: that whichever view is taken there is danger for India from the East. For if China becomes a first-class power we have the "Yellow Peril," in a more or less pronounced form; and if China breaks up, it means the substitution of possible European aggression for Chinese.

#### RAILWAYS.

The question of railways enters very largely into that of "The Middle East." Looking at the matter broadly and from a point of view which will embrace the construction of railways in any country bordering on India, the gist of it appears to be as follows.

It has already been pointed out that the ideal political situation for India is a circle of strong, independent (or semi-independent) native states, to act as buffers against the big powers which lie beyond. Anything which makes the advance of foreign influence, or foreign troops, easier into these states, is on the face of it bad for India. Railways perform both these functions. Unfortunately, railways in the East are not, too often, considered in a common-sense manner as to their effects, for good or evil, on the Empire at large. A certain amount of clap-trap, under the guise of such expressions as "the march of civilisation," "opening up of the country," "increase of trade," "England to India in eight days," and so forth, is indulged in. Such questions as to whether the march of hostile armies may not be facilitated as well as that of civilisation, whether there is sufficient prospect of trade in the country concerned to warrant it being opened up, whether England to India in eight days is such a great advantage after all, and finally out of whose pockets is the money coming to build the proposed line; these and other practical questions are inclined to be smothered under a flood of high-sounding rhetoric. Again, whether it is, or is not, to the advantage of the community at large that the proposed line should be built, its construction is always to the obvious advantage of one particular section of the community. And this particular section generally makes its voice heard with no uncertain sound. Karachi and the proposed Trans-Persian railway is a case in point.

Strategical objections, too, are often waived impatiently aside, they cannot for a moment be allowed to weigh against the solid parts of £ s. d. Apparently a certain class of civilian mind cannot grasp the fact, that a very heavy price in hard cash must be paid for creating a dangerous strategical situation. For example, a railway is built which increases the trade of a country to the extent of £x per annum, but which at the same time creates a new strategical situation demanding an increase in naval and military expenditure of £y, in addition to a heavy annual expenditure of £z. Even the most accomplished of financiers would find it difficult to prove that

such a railway was a commercial success—in the widest and truest sense of the word.

Railways, built by European powers, in the countries bordering on India, are dangerous in two ways: in time of war—for the transport of troops, in time of peace—for 'peaceful penetration.' With regard to the former, the use of the Trans-Siberian line in the Russo-Japanese struggle, is a historic example. But it is the latter which presents even greater dangers, though too much attention, perhaps, is concentrated on the former contingency. For instance, there seems a tendency, when considering the possibility of a Russian invasion of India, to discuss the question only from the point of view of a state of war, and to imagine that such a war will break out with the British and Russian frontiers on their present alignments. But on investigation this seems unlikely in the extreme. The more probable alternative is that Russia, by means of railways, will pacifically penetrate the countries which at present divide her from India, each advance in itself duly supported by plausible reasons, being insufficient for a *casus belli*—(unless, indeed, we take up a firmer attitude than we have sometimes done in the past). When by this process, assisted by any advances on our side, which we may have been compelled to make in order to forestall Russia, the Russian and British frontiers in Asia are conterminous, then and not till then, will the actual invasion by means of open war commence.

To put the matter in a nutshell, by borrowing and adapting a famous simile: railways in the Middle East are pistols held at the heart of India.

The above is one side of the railway question; there is, however, another and its converse.

We cannot hope to keep India indefinitely isolated by buffer states. The tendency—to which we have already referred—of European states to expand when adjoining Oriental ones, must go on, whether this expansion takes a form, commercial or political. Those Oriental states which are still independent, must sooner or later come under European political control, or—if retaining their independence—must adopt European civilisation—a chief feature of which are railways. If, therefore, railways across the buffer states are inevitable, the only true policy for us is to have a hand in their construction, and a consequent control in their working, with all that this implies. In other words—to revert to the simile quoted above—if there must be pistols menacing the heart of India, let us endeavour to take such measures that there may be at least a chance of us pointing them the other way, when the need arises.

But in the meantime it is to our obvious advantage to preserve the *status quo* as long as possible, and in just so much as our attitude is firm or the reverse, will the duration of the *status quo* be long or short.

#### RUSSIA'S ROAD TO THE SEA.

Russia's vital need of reaching the sea has already been referred to as one of the three great principles which govern the consideration

of the Middle Eastern question. It remains to consider this important factor in greater detail.

There are four directions in which Russia can reach the open sea :—

- (a) By the Black Sea to the Mediterranean.
- (b) Through Asia Minor to the Mediterranean.
- (c) Through Persia to the Persian Gulf.
- (d) Through China to the Chinese sea-board.

By these she will naturally choose the line of best resistance.

From Russia's point of view no advance to the sea is of any practical value unless it carries with it territorial possessions as well. Territorial possession in the case of (a) would mean the ousting of the Turk from Constantinople, the absorption of the Slav Balkan states, through whose medium she eventually hopes to extend her empire down to the Bosphorus, a probable war with Austria and Germany allied, and a certain estrangement—if not worse, with Great Britain, who could not afford to have Russia thus placed in a commanding position across her communications with India. It is, therefore, most unlikely that Russia will press her path to the sea, in this direction, for some time to come, unless, indeed, any danger of a Germanic-Austrian advance arises.

Any advance by (b) will also run against Teuton interests, as German hopes of establishing colonies in Asia Minor are very strong, and by means of various concessions—such as those at Alexandretta, and those connected with the Baghdad Railway, every effort has been made to extend and consolidate German influence. Again, Russia established on the Levantine coast would menace our communications with India, just as much as from Constantinople.

This does not mean that Russia will stay her hand in Asia Minor for fear of offending German or British susceptibilities—far from it. But it does mean that any advance through Asia Minor seawards will meet with considerable opposition; that, therefore, Russia will be compelled to move slowly, and that in the meantime she will use her energies in some easier direction—Persia, for example.

For an advance by (c) is much more favourable to Russia, Persia herself could offer no practical opposition, and instead of there being two or more countries, whose interest would be vitally affected by such a move, as in the case of (a) and (b), there would be only one *i.e.*, Great Britain.

The present conditions for the continuance of the British Empire in the East, which would be altered for the worse by the growth of Russian, or any other foreign influence in the Persian Gulf, are thus indicated by Captain Mahan.

“First her (*i.e.*, Great Britain's) security in India, which would be materially affected by an adverse change in the political control of the gulf; secondly, the safety of the great sea route, commercial and military, to India and the Farther East, on which Great Britain is actually the chief traveller, though with a notable elimina-

tion that demands national attention ; and, thirdly, the economic and commercial welfare of India, which can act politically only through the Empire, a dependence which greatly enhances obligation."

The following remarks by Mr. Lovat Fraser are in the same tenor, and serve to emphasise a point which is sometimes lost sight of :—

" But, and this is the most important part in the whole question of the gulf, in order to disturb irreparably the rule of the British in India, it is not at all necessary for a foreign power to create a fortified base in gulf waters. A mere territorial acquisition, the presence of a small garrison, the creation of a quite defenceless harbour of refuge would suffice. The moment it became known that Russia, or Germany, or France, or any other powerful nation, had planted a post within easy reach of the shores of India, an ineffaceable impression of the impermanency of British rule would be produced throughout Hindustan. Industrial enterprise could be checked, native capital would no longer be invested, the spirit of unrest would receive a strong impetus, the task of holding the country, already difficult, might become almost impossible."

By a process of elimination, therefore, there remains for Russia the road to the Chinese sea-board. It is of course impossible to even attempt a discussion here on such a question as the future of the Far East, but speaking very generally, Russia's advance to the sea in that direction does not seem to touch the vital interest of Great Britain in the same way as her advance in the other three directions mentioned. Strategically Russia's extension to the Pacific would put her across no life line of the British Empire, that to Australia from India, or the Cape, running far to the south. Strategically, again, Russia on the Chinese sea-board does not immediately threaten the safety of India, as she would, for instance, from the shores of the Persian Gulf. It is true that in the "long view" which we are taking, the possibility of a future and very gradual advance of Russia from the Chinese sea to the N.-E. Frontier of India must be included. But, first, such a contingency is in the remote future, while a Russian advance across Persia, once railways are made, is a possibility of the near future, and, second, as a check on such an advance there are the nations of Japan and China, to say nothing of the European nations, whose vested interests in the Far East are considerable. It is true that we have great commercial interest in China. It is true also that if Russian political influence extends in that country, the above interest may suffer to a certain extent. But it is likewise true that such losses, if experienced, will be inevitable. *Russia, in order to fulfil her natural destiny as a great nation, must reach the sea.* It is one of the most important objects of British foreign policy, not to seek for a Russian line of advance which will cause no harm to British interest, because such a line does not exist ; but to seek for a line which will do the least harm, and, when such a line has been found, to see to it that the least possible harm occurs. Such a line, and such a policy, seem to indicate China.

## OBSERVATION FROM AEROPLANES IN FIELD-WARFARE.

(COMMUNICATED BY THE GENERAL STAFF, ARMY HEAD-QUARTERS,  
INDIA.)

The introduction of aeroplanes as a new means of reconnaissance in war is of recent date. At first it seemed as though the pilot would be able to combine the duties of steersman and observer. The French in particular favoured lightly-built one-seaters, and they trained a considerable number of General Staff Officers as pilots.

The ever-increasing efficiency of aeroplanes, however, led to a corresponding increase in the difficulties of pilotage. Greater stability, greater reliability of the motors, and improved designs enabled aeroplanes to cover greater distances, whilst the possible effect of infantry and artillery fire compelled them to rise to greater altitudes. Thus the higher demands made on the skill of the pilot led to the necessity of training special observers.

The most obvious expedient was to select these observers from amongst the pilots themselves and thereby to provide each craft with a reserve man who could assist the pilot in his duties or relieve him altogether should the strain of a long continued flight begin to tell upon him. Generally speaking this idea is no longer held to be sound. The species of dual control to which it gave rise was likely to cause disaster at critical moments owing to both pilot and observer defeating each other's efforts by attempting to work the control-gear in different ways. Besides, the observer was preoccupied with mechanical details whilst his attention was diverted from his specific duties of orientation and reconnaissance. The less the observer is disturbed in the performance of these duties the better will he accomplish his task, although, of course, he must possess technical knowledge. He must be fully acquainted with the construction and action of the engines so that he may be able to lend the pilot a helping hand if required. At other times he must implicitly trust the pilot who on his part must have absolute confidence in his observer regarding all such matters as may be summed up in the term "orientation," *i.e.*, direction, location of the aeroplane's position, etc.

The observer's duties include orientation as above defined, reconnaissance, the service of defensive weapons and the dropping of bombs; he must also be skilled in the use of photographic and optical apparatus (see below, under "artillery observation") and in the use of wireless telegraphy.

To the lay mind the orientation of aeroplanes seems simple enough, and in clear weather it is certainly not difficult to determine the direction of flight by simply comparing the lie of the land with the map. Roads, railways, water-courses and lakes, villages and woods all afford valuable aids, but undulations of the ground cease



to be recognizable once a certain height has been attained. The difficulties of orientation arise when flights are undertaken in cloudy, wet and foggy weather. Great distances are traversed in a few minutes; a following wind may cause the craft to travel two kilometres per minute. If the observer once loses his bearings, even for quite a short time, he will find it no easy matter to refix his position when the dispersal of clouds, or other obstacles to view, once more renders the use of the map feasible. From this it follows that the observer's eyesight must be perfect and that he must be able to use it with the utmost rapidity, that he must have a good eye for country and be an expert in map-reading.

Areas in which water-courses and woods are scarce present peculiar difficulties to the aviator, particularly if they are much intersected by roads. The observer may easily mistake one road for another, and villages, etc., that may be in the neighbourhood are so difficult to identify from above that they will help him but little unless they happen to be distinguished by conspicuous landmarks. The observer will therefore do well to check his direction from time to time by means of his compass and the position of the sun.

Only the most unremitting vigilance on the part of the observer will enable him to keep his bearings correctly. Even in peace-time the pilot will not be overjoyed if forced to descend in unknown country because his observer has failed him; in time of war a descent into the enemy's theatre of operations will entail the loss of the craft.

The reconnaissance duties of the observer will vary greatly and will depend on the object of the flight. This may be "operative," i.e., active or aggressive, it may be purely tactical, or it may be confined solely to locating hostile artillery and observing the effect of fire directed against it.

An active reconnaissance that will lead the observer far into the enemy's sphere of operations is the most gratifying and the most interesting. If the enemy is still engaged in assembling his forces or if the direction of his advance is not yet known, aeroplanes will be allotted certain strips of country similar to those allotted to reconnoitring squadrons. These strips should be as long and narrow as possible.

If the line of advance is known, then certain roads will have to be reconnoitred. In this case it is particularly important to ascertain the exact extent of the opponent's front with a view to the possible necessity of developing, turning or outflanking movements against the hostile columns.

In both cases the observer must not merely be able to see well, he must also be capable of forming a correct estimate of what he has seen. He must consequently be equipped with an adequate knowledge of tactics. The General Officer Commanding will not only want to know that a column is marching along a certain road: he will above all things want to know its strength. It is simple enough to locate a column in clear weather, but when mist or rain prevail it is a very

different matter. Only a clear eye, combined with an intimate knowledge of the enemy's habitual order of march and march formations, can convey to the mind of the observer a true picture of what he beholds. It is not easy to determine the number of battalions, to distinguish machine guns from artillery, or to discriminate between light and heavy guns used in the field, and the problem becomes more puzzling still when the view is obscured by clouds of dust.

Experience teaches that transport may be mistaken for columns of all sorts. The observer must therefore be fully *au fait* with tactical conditions before he can tell on which roads columns of all arms, ammunition columns, train or transport may be expected. The general principles on which the latter follow the fighting troops must be well known to the observer, and from this it follows that a task of the kind described is not one that can be entrusted to any observer.

Battlefield reconnaissances also make high demands on the observer's skill. From some types of aeroplane lateral view is so restricted that small bodies of troops cannot easily be detected, but, even where a good view is obtainable, no observer will be able to furnish a report of value unless he is well versed in tactics. The fighting formations of different armies and individual arms, the tactical distribution of forces of all arms in attack and defence and the principles guiding the employment of reserves must all be well known to the observing officer; whilst highly developed powers of observation and continuous practice will be essential before he can hope rightly to estimate the strength of deployed infantry. The whereabouts of forces kept back from the fighting line will not be discovered by the observer unless he knows where to look for them. To locate artillery, he must know the principles underlying the choice of artillery positions and the probable depth between firing batteries and wagon-lines in action. A faultless report on concealed guns will constitute a valuable asset in the hands of the General Commanding.

Aircraft reconnaissances and observations from aircraft will in future be of considerable use to artillery. It was formerly pure waste of ammunition to fire at an enemy who had not been located, but now—outside conditions being favourable—the positions of concealed batteries can be quickly determined by means of air reconnaissances. Observations of fire from aeroplanes, and the transmission, by means of visual signals, of the observations made, may be expected to confine searching and sweeping fire to very much narrower limits. Only a true eye for ground, coupled with the ability to judge from above the fall of rounds bursting on grass or in the air will ensure accurate reports.

On our field-days, and during manœuvres, uniformly trained troops are opposed to others similarly trained; units at war-strength, and accompanied by their transport vehicles, are rarely met with. The reconnaissance of forces fighting at peace-strength, and according to well-known tactical principles, makes things too easy for the

observer and spoils him. In war it is a case of reconnoitring an enemy whose ideas on the subject of handling mixed forces the observer must deeply impress upon his mind before the war begins. Only the most thorough peace-training can fit an observer for war ; indeed, his reconnaissance duties are of such paramount importance that it seems desirable to make the pilot assist in their performance. His more practised eye will in many cases more quickly detect small bodies of troops.

In war reconnaissance operations will presumably be interfered with by hostile fire and hostile aircraft. It has been proved that single rifle or shrapnel bullets do not harm aeroplanes unless they happen to strike particularly sensitive parts or hit the pilot. In order to avoid fire the craft must rise to some height, but, on the other hand, the height reached must not be such as to render observation impossible ; it must not exceed certain limits which will vary with the eyesight and the degree of efficiency attained by the observer.

Hostile aircraft will endeavour to put aeroplanes out of action, but, thanks to their superior speed, the latter will easily evade airships. The enemy's aeroplanes must be dealt with by means of defensive weapons and, as the pilot will be sufficiently occupied with his own work, these must be fought by the observer. His task will be no mean one either, for it goes without saying that it is a matter of some difficulty to engage a rapidly moving target from an equally rapidly moving platform. An aeroplane will achieve a brilliant success if it can manage to set fire to an airship by means of specially constructed projectiles.

Competitions held last year have demonstrated that aeroplanes equipped with good sighting and discharge apparatus are able to drop bombs on to moderately large targets such as bodies of troops assembled at railway stations, on roads or in the field.

The dropping of bombs is another of the observer's duties and one in which nothing but constant practice will lead to proficiency.

The object of the foregoing remarks is to stimulate interest in the art of observing from aeroplanes and to point out some of the difficulties that must be overcome. At present the performances of the observer are not sufficiently appreciated, whilst the pilot receives the full measure of recognition which is his due. Successful reconnoissances will result only from the intelligent co-operation of both pilot and observer. The latter not only shares to the full the risks of the former, but, throughout the dangers that must be faced, he places his life in the hands of another, and numerous recent instances prove that the fear of death is beyond his ken.

## AN EXPERIMENT IN CO-OPERATIVE BANKING.

### THE 10TH LANCERS REGIMENTAL BANK.

By Lieut.-Colonel W. L. MAXWELL, 10th Lancers.

The 10th Lancers Co-operative Bank opened its doors on 1st May 1912, and, as I believe it to have been the first Institution of its kind in the Indian Army, a short account of how it was started, and how it has since progressed, may be of interest.

It is well known that Village Co-operative Banks have taken a strong hold in many parts of rural India, and nowhere more so than in the south-east of the Punjab, where they are very numerous and yearly increasing in popularity. It seems evident that what is advantageous in this system of co-operation amongst villagers may, in a large number of ways, be advantageous also to the Indian Soldier, especially in helping him to free himself from the bondage of the professional money lender.

The Standing Orders of probably every regiment in the Indian Army contain a paragraph which runs somewhat as follows :—

“Regimental Bunniahs are forbidden to lend money to any Native Officer, Soldier or follower. Native Officers and Non-Commissioned Officers are ordered to report any case of borrowing, or attempting to borrow from the Regimental Bunniahs that may come to their knowledge.”

In spite of this, it is within the knowledge of every Officer that Indian soldiers always have been, and always will be, in debt to the Regimental Chaudhri or their Half Squadron or Company Bunniahs, and, whenever a proposal is made to do away with the Regimental Bunniah System, the only argument against it that is worth listening to is that the men are so involved, that without a Government loan, granted for the purpose of discharging their debts, it is impossible for a Regiment to dismiss its bunniahs.

This time last year the 10th Lancers had given their Bunniahs notice to leave, and although I had no official knowledge of their having lent money to the men, it was as certain as anything can be in this world, that claims would very soon begin to be made, and a full and early settlement demanded.

The Regiment was also under orders to move in relief from Jullundur to a station in Baluchistan where there was no accommodation for families. Married men had therefore to arrange to send wives and children to their homes, which, in some cases were very distant, and all ranks had other expenses to face in connection with the move.

For these reasons and others, it therefore seemed a more than usually favourable opportunity to learn something about the system of Co-operative Banking, to see if it could be usefully applied in our

case, and to find out whether there was any pronounced wish in the Regiment to give it a trial.

The literature on the subject is not extensive, and, in our case, was practically confined to the following three books:—

- (1) People's Banks for Northern India, by H. Dupernex, I.C.S., Thacker, Spink and Company.
- (2) Agricultural Co-operation in the Punjab, by S. Wilberforce, I.C.S., Civil and Military Gazette Press.
- (3) How to Start a Punjab Village Bank, by Inspector Abdul Majid Khan, Civil and Military Gazette Press.

Much useful information was also asked for and obtained from Major J. C. Coldstream of the Punjab Commission, who had formerly belonged to the 10th Lancers and has been a Registrar of Co-operative Societies, and from Mr. A. Langley, I.C.S., the present Registrar in the Punjab.

The next step taken was to invite Mr. Abdul Majid Khan, Inspector of Village Banks, Jullundur district, to come to our lines and lecture on the subject. This he at once consented to do, and on the appointed day the whole Regiment paraded for the lecture and sat in three sides of a square under trees, while Mr. Abdul Majid Khan explained the advantages of co-operation and told us how a Bank could be started. His lecture was admirably lucid and convincing questions were invited and clearly answered, and his good nature, patience and tact, during the discussion which followed, were marvellous. There is, however, generally "a fly in the ointment," and the present occasion was no exception to the rule. Just as everything seemed to be pointing to absolute unanimity in favour of starting a Bank, a senior Indian Officer, a Mohamedan, rose and asked the lecturer to explain how he (the speaker) could take a share in the Bank without violating the tenets of his Faith. Mr. Abdul Majid Khan replied that nothing could be easier, and gave his reasons. His opponent, however, was entirely unconvinced by these, and demanded further arguments, adding that, if it were proved to his satisfaction, Mahomed and his Holy ones were not opposed to holding shares in an "interest-producing" concern like a Bank, he would at once invest Rs. 3,000 in it.

Upon this point an interminable controversy arose. In vain did the lecturer point out that there was no need for a Mohamedan to accept any of the interest due to him from his shares; that he might announce, before investing, that he would forego it, or that he might, on distribution of profits being made, give whatever came to him to any worthy object, such as his Masjid or the Poor. In vain did he quote the fact that, out of 500 village Banks in the Jullundur district, 450 were entirely composed of Mohamedans, and ask whether "the Sirdar" questioned the orthodoxy of his co-religionists in this part of the world. The Sirdar replied that he "questioned" nothing, as he had no acquaintance with any of the individuals mentioned. "What!" said Abdul Majid, "you have been quartered here nearly six years, and do you mean to tell

me that you do not know a single local Mohamedan ? " " Not one," was the answer, with the polite addition—" but I hope to make their acquaintance soon."

Seeing that no progress was being made, I closed the discussion and the meeting.

The result of course was that not a single Mohamedan was now willing to join the Bank, and we were faced with the alternative of abandoning the whole scheme, or of making a beginning with only five-eighths of our total strength. After taking counsel with the rest of the Regiment, it was found that there was such a strong desire among the Sikhs and Dogras to have a Bank, and such a firm conviction that Mohamedans would gradually join in when the time came to send their families home, and when the departing bunniahs began to exercise pressure on their debtors, that it was finally determined to push along with the scheme.

Rules and Bye-laws were accordingly drafted and sent up to the Registrar for sanction, an application for affiliation to the Punjab Co-operative Credit Societies was made, a Committee, Secretary and Treasurer appointed, and all ranks, British and Indian, invited to take shares. Finally all preliminaries being adjusted, the 10th Lancers Co-operative Bank started as a going concern on May 1st, 1912, with a membership of 126, and a capital of Rs. 7,360.

Since that day the Bank has progressed very steadily, and, as anticipated, a number of Mohamedan members now belong to it. In fact nearly 25 per cent. of the Punjabi Mohamedan Squadron and of the Pathan Half-Squadron are shareholders at the present moment.

At the end of February 1913 (*i.e.*, 10 months after starting)—

- (1) there were 267 members on the Register who possessed 1,515 shares of Rs. 10 each (fully paid up), an average holding of nearly 6 shares per member.
- (2) Rupees 19,966 had been issued in loans to members.
- (3) Rupees 7,085 had been placed in the Bank on fixed or floating deposit; and
- (4) a cash balance of Rs. 3,775 was available for further loans.

The object of the Bank, as stated in Bye-law No. 2, is "to provide the members with loans for necessary objects, and to encourage among them thrift, self-help and co-operation." Members may borrow up to the amount of their "assamies," or beyond that limit, if other members stand security for the balance.

I may mention here in parenthesis that the Regimental Bunniahs left when the Regiment marched for Loralai, and every one of them, before going, handed me a certificate stating that he had no claims against any man in his Half-Squadron, with the exception of two Pathans, who were seconded, and out of reach both of the Bank and of their creditors. That no trouble was incurred in reaching this satisfactory settlement I believe to be due entirely to there being a Regimental Bank in operation, for in many cases, I have no doubt, there were hereditary debts to be settled, incurred

years ago by fathers and uncles of men serving, and passed on by them to their successors.

The "necessary objects" mentioned above, for which loans are granted, generally fall under one of the following heads:—

- (1) Liquidation of loans to village Sahukars at the men's homes.
- (2) Marriage expenses.
- (3) Building or re-building houses.
- (4) Purchase of bullocks and stock, and improvement of land by sinking or repairing wells.
- (5) Redemption of mortgages.

The utmost emphasis was laid by Mr. Abdul Majid Khan in his preliminary lecture, and by all of us since, on the advisability of paying off debts to money-lenders as soon as possible, and of borrowing money from the bank for this purpose; and it is constantly being impressed on all that the man who is in his village Sahukar's clutches is a bondman, who can never *hope* to regain freedom by his usual method of paying irregular instalments of the original debt and interest when it suits him, but that by taking advantage of the help the Bank is willing to afford, he can be certain of doing so in a reasonable time.

The Bank is generally popular now, although a Mohamedan member occasionally comes up and asks to resign his membership, on the ground that he is being chaffed by his co-religionists and called an "Interest Eater." Such resignations are of course at once accepted, and the Bank officials are sanguine that these same men will, when it suits their interest, take shares again.

All ranks use the Bank as a place in which to deposit (without interest) any money they wish to keep in safety before going on leave, or remitting home, and, although this may add to the clerical work, it helps to make the Institution popular. In former days when a man had cash, the safest place in which it could be kept was in his Half-squadron Bunniah's strong box, and for this privilege (I am informed) he was actually *charged*—not given—interest for the time his money was deposited, which shows the extent to which these bloodsuckers drained their unfortunate clients. Each member's liability is limited to a maximum of Rs. 3 per share, and lasts for two years after relinquishing membership. It is not an expensive concern to run, for the only paid official is the "writer" who keeps the Pass Books, and he is satisfied with the anything but princely salary of Rs. 2 per mensem.

No distribution of profits has yet been made, nor will any be made until after the annual meeting in August next, but we hope then, after paying all working expenses and charges, and placing a sum to reserve, to be in a position to declare a modest dividend to shareholders. This, however, is not essential, for in village banks it appears to be the rule that no profits shall be divided for the first ten years, but a Regiment, with its men constantly leaving and joining, is not such a permanent community as an Indian village, and a modification of some rules is therefore

necessary, especially as among our Bye-laws is one that only allows membership to men actually serving.

The Indian Cavalry soldier, as is well known, is often a man of substance, and has money to invest. Up till now, the only way to do this was either to become a money-lender himself (which gives him a pretty bad name), or to keep on purchasing land, which, as long as he remained in the service, he might find it difficult to manage with advantage. The Regimental Bank, with its safety, its lack of red-tape, and its moderate rate of interest, is now beginning to appeal to him as a promising investment either by increasing his holding in shares, or by putting his money at fixed deposit, and we have several capitalists who have quite considerable sums placed in one or both of these ways.

By affiliation with the Punjab Co-operative Credit Societies the following advantages are gained :—

- (1) The Regimental Bank is inspected by one of the officials, and its accounts are sent for audit to the Registrar, who had also to be consulted on other matters, such as alteration in the rate of interest on loans.
- (2) The Regiment becomes entitled to deal with certain Co-operative Industrial Societies in the Punjab. For instance, we get Regimental pattern "Lungis" and "Kummurbunds" made and delivered direct by a Co-operative Weaver's Society, paying the same price as we did formerly to a Contractor, but stipulating for (and obtaining) a superior quality of material and workmanship. From a "Lohar's" Society we get Stirrup-irons, Spurs, "Kurpis," etc., and with a Mochi's Society we are now trying to fix a sample of "Gurgabi" that will satisfy both sides.
- (3) Any surplus money in the Regimental Bank, which may not be required for loans in the immediate future, can be placed on 12 months or two years' fixed deposit with one of the "Central Banks" or with any other Co-operative Bank in the Punjab at a remunerative rate of interest.

To conclude, the Bank has proved itself a success and of use to its members, and there is no apparent reason why its prosperity should not continue and its aims be fulfilled, if carefully managed and superintended, and I write these notes in the hope that Commanding Officers of other Regiments in the Indian Army, who are still labouring under the "burden of the Bunniah" may see that a way of escape (without applying to Government for help) is open by the Institution of a Regimental Bank. A copy of our Bye-laws is appended for information.

#### BYE-LAWS.

1. The Bank shall be called "The 10th Lancers Co-operative Bank."



2. Its object shall be to provide its members with loans for necessary objects, and to encourage among them thrift, self-help and co-operation.

#### MEMBERSHIP.

3. Members are confined to British and Indian Officers, Non-Commissioned Officers and men serving in the 10th Lancers.

#### COMPOSITION :

- (1) President.
- (2) Vice-President.
- (3) Committee.
- (4) Members.

The Committee shall consist of five members, who will hold office for two years and be eligible for re-election. Should any member of the Committee be absent on Command, Furlough or Leave, his place may be temporarily filled by the President nominating another member.

The Committee shall have the following powers and duties :—

- (1) To deal with applications for loans. (Such applications will be recommended on real emergency by Half squadron Commanders and Pay Sowars will endorse on the application the amount of money due to the Regiment by the applicant.)
  - (2) To fix the rates of interest on loans in accordance with the terms in force at the time.
  - (3) To control recovery of loans, especially the repayment of at least 2 per cent. per mensem of the loan in addition to the interest
  - (4) To see that the loans are applied to the purpose for which they were granted.
  - (5) To hear and decide complaints.
  - (6) To receive deposits, and borrow money on behalf of the Bank, and to repay such loans and deposits.
  - (7) To modify the rates of interest on fixed deposits. If this is done, notice will be given to depositors who may then withdraw their money if they wish to do so.
  - (8) To receive and disburse money and other property on behalf of the Bank and to arrange for the safe-guarding of funds and documents.
  - (9) To examine and check accounts.
  - (10) To consider the inspection notes of the Registrar and Inspector, and make proposals with regard to them.
  - (11) To acquire shares on behalf of the Bank.
  - (12) Generally to carry on the business of the Bank.
4. Membership shall cease on—
- (a) Leaving the Regiment for any cause ;
  - (b) Death.

5. Members on leaving the Regiment may withdraw from the Bank only after liquidating their loans, etc.

6. A member may be expelled from the Bank for any dishonesty in dealing with the Bank. He will be paid the value of his shares but will not receive any portion of the profits.

7. Members on leaving the Regiment shall be paid the money lodged with the Bank in the following August.

8. In the event of a member dying, all moneys due to him shall be paid to the heir mentioned in the "kindred roll" of his Sheet Roll.

9. Any money due to a member from the Bank in the way of share money, deposits or profits may be appropriated in payment of his debts to the Bank.

10. In the event of the society being wound up, every present and past member of the society shall be liable to contribute to the assets of the society to an amount, limited to a maximum of three rupees on each share owned, sufficient for payment of the debts and liabilities of the society and the cost, charges and expenses of the winding up and for the payment of such sums as may be required for the adjustment of the rights of the contributories amongst themselves, with the qualifications following (that is to say):—

(a) No past member shall be liable to contribute to the assets of the society, if he has ceased to be a member for a period of two years or upwards prior to the commencement of the winding up.

(b) No past member shall be liable to contribute in respect of any debt or liability of the society contracted after the time at which he ceased to be a member.

11. Capital shall consist of:—

(1) Rupees ten per share prepaid. (Every member shall have to buy at least one share, and no member shall hold shares to the value of more than one-fifth of the share capital.)

(2) Individual Deposits.

(3) Profits.

(4) Reserve Fund.

12. A General Meeting will be held—

(a) Once a year, at any time after first August, to consider and pass the accounts of the preceding year. Accounts will be closed and balanced on 31st July, with a view to divide profits in the following August.

(b) When summoned by the President.

(c) When desired by the members. One-third of the members shall form a quorum.

13. The Secretary and Joint Secretary—

(a) Will attend all meetings of the Committee.

(b) Will record the proceedings of each Committee (Meeting) and get them signed by the President.

(c) Will keep accounts accurately and up to date.

14. Treasurer.

(1) The Committee will appoint one member as a Treasurer.

- (2) He will be responsible for the accuracy of accounts under the supervision of the Secretary.
- (3) The Cash Book will be in the possession of the Treasurer, and daily transactions will be signed by the Secretary.

#### 15. Loans.

- (1) Half Squadron Commanders, when forwarding applications for loans, will note the emergency, and state if the loan should be granted on production of a security or otherwise.
- (2) Loan applications, signed by Half Squadron Commanders and approved by the Committee, will be entertained for loan.
- (3) Loans not used for the specific purposes for which they were obtained may be recalled by the Committee at any time.
- (4) The rates of interest on loans shall be  $12\frac{1}{2}$  per cent. per annum. This rate shall only be altered by a two-thirds majority in a General Meeting, and with the sanction of the Registrar.

- 16. (1) Any member may see his account when he desires to do so.
- (2) Five per cent. of the net profits will be deposited as a Reserve fund, while the rest of the profit may be distributed amongst shareholders according to the number of their shares.
- (3) The President of the Bank shall be responsible for deducting money due to the Bank from the estates of deceased, discharged or retired members, before remitting their assami money to their homes.
- (4) Recoveries on account of loans and interest will be made through Half Squadron Commanders, who will send the money recovered, with a list, to the Secretary for making entries in the Pass Books, etc.
- (5) If a Pass Book is stolen or lost, a new book will be issued on payment (price one anna each).
- (6) Bank working days will be Thursday and Sunday only.
- (7) Deposits made before the 15th of a month will be calculated for interest on the full month. Those made after the 15th will begin to earn interest the following month.

The same rule will hold good as regards withdrawals.

#### REGISTERS AND ACCOUNTS.

The following books shall be kept up:—

- (1) Register of members. (This should be corrected every year.)
- (2) A book of proceedings of the General and Committee meetings, and of inspection notes of the Inspector and Registrar.

- (3) A Cash Book showing all receipts and expenditure and the Balance in hand, which shall be struck each day on which an entry is made.
- (4) A ledger showing the account of each member with the Bank.
- (5) A Pass Book for each member and for each depositor.
- (6) A Register showing instalments for repayment of loans (*kishtbandi*).
- (7) A Register showing the payment of shares.

#### FIXED DEPOSITS.

17. Any man enlisted in the Regiment or not, may place money in the Bank on "fixed deposit," but no item under Rs. 10 will be received.

Rates of interest for fixed deposits will be :—

For one year 6 per cent per annum.

For half-year 4 per cent     "     "

#### MISCELLANEOUS

18. Stationery expenses will be paid out of profits before distribution.

19. A member may sell shares in any quantity to another member approved by the Committee.



## MINOR TACTICAL PROBLEMS FOR CAVALRY.

BY MAJOR-GENERAL M. F. RIMINGTON, C.B., C.V.O.

*(Communicated by the General Staff, India.)*

1. Last year a translation of a paper by Lieutenant-General Franz Rohr, Inspector of the Hungarian Landwehr Cavalry, was published and circulated under the orders of the Commander-in-Chief by the General Staff. It was entitled "Practical Exercises in the Training of Cavalry for the fight with tactical instruction of Cavalry Leaders" and, as its title indicates, it refers to the instruction of the cavalry arm alone, but the suggestions contained in it were considered as being equally applicable to all arms.

This paper was written primarily with the object of dispelling the idea that practical tactical instruction in the field is impossible unless unlimited ground be available. The writer combats this idea with considerable skill. He shows how in close vicinity to a continental garrison town situated in a populated and highly cultivated district, it is generally possible to find a temporarily uncultivated area over which useful practical instruction can be given, provided the director has sufficient ingenuity to frame suitable exercises. Even when given, as in India, ample ground for such exercises, the question of framing suitable schemes is one which presents to some a considerable difficulty. This difficulty disappears with constant practice, and it is with the object of assisting those officers who lack such experience that the following notes are compiled; they should be read in conjunction with, and as complementary to, General Rohr's paper. Partly to preserve the sequence with that pamphlet, and partly because it is in the cavalry arm that the rapid appreciation and solution of practical problems is so important, the situations given in the following notes, for the most part, have special reference to that arm. This system of instruction is, however, one which is of general application.

2. Tactical knowledge can, to a large extent, be improved by practice in the solution of problems illustrating situations in the field.

In every campaign situations occur in which officers in command of small forces or detachments have to make important decisions.

Though it is obviously impossible to foresee every situation, any system which tends to a rapid yet logical reasoning out in peace of a tactical situation, the careful consideration of the *pros* and *cons* of each line of action, ending with a decision based on these points, must be of advantage in war to those who have undergone this training. In order, however, to obtain full benefit from the practice it will not suffice for senior officers to test their subordinates once only during the period of training, problems should be constantly set. Below will be found examples of problems, some in skeleton and some based on incidents which have occurred in actual warfare.

It is not intended that these examples should be strictly adhered to. Subsidiary problems will often arise out of the problem in hand.

Situations which are difficult to the point of appearing hopeless should sometimes be set, for in war the apparently impossible is often possible.

It should be understood by all that it is only by committing faults that lessons are learnt, the most successful leader is he who makes the fewest errors.

3. *Hints to directing officers.*—Whenever a decision is a resolute one, taken on the spur of the moment, it should be commended, provided it is consistent with common sense.

This rapidity of decision, however, must not degenerate into undue haste in execution, it should be followed by orders which assign to each unit its task.

Directing officers should pay special attention to—

- (a) the demeanour and bearing of their officers when with troops—there must be no relaxation of discipline;
- (b) the manner in which orders are issued. This has a great influence on their quick and correct execution.

Verbal orders should usually follow the sequence given for written ones, *viz.*—

Situation, Intention, etc.

Sentences should be well punctuated, so as to give time for all to grasp the meaning.

To a regiment of cavalry, or a battalion, orders can sometimes be given personally by the Officer Commanding, provided he has a trained voice. This is often preferable to passing orders down to subordinates, for the reason that each man knows what is the intention of the Officer Commanding, and if separated from his fellows is still a thinking soldier, with no excuse for omitting to aid the general undertaking.

Time, usually an all-important factor in the action of the faster moving arms, is saved.

The moral effect of a direct order from the Officer Commanding is preserved. In the mounted branches, whilst testing and instructing by problems, directing officers should pay the strictest attention to steady manœuvre—all ranks must retain complete self-control and not give way to excitement.

The director or his assistant should note any mistakes, but comment should usually be deferred until the conclusion of the exercise when the officers taking part should be given an opportunity of describing or giving reasons for the action taken by them. The director will then give his own views which should in turn be communicated to their subordinates by the officers under instruction. This is best done on the ground.

4. In framing situations, it will be found of assistance to take some incident in a campaign, *e.g.*, the South African or Manchurian wars or the campaign selected for the C and D examination.

A problem, illustrating an incident in real warfare in which large numbers were engaged, may often be worked out with a greatly reduced number of troops.

Having chosen the incident which exemplifies the point or principle which it is desired to bring out, all that remains is to apply it to a piece of ground available for manœuvre and suitable to the exercise, employing a flagged enemy, thoroughly instructed in its duties, to create the situation. When the ground for manœuvre is limited it will be, of course, necessary to reverse the process, and select a scheme suitable to the ground.

Another good plan, provided that there is a sufficient and suitable extent of manœuvring area, is to take the incidents of a campaign and follow them out in order during the training season.

The following are a few suggestions for schemes based on the foregoing principles. They are all in skeleton form and some give situations which actually occurred in war.

#### A.—PROBLEMS IN RECONNAISSANCE.

(a) To cross a river on a wide front, when the opposite side is held by the enemy. The difficulty was well illustrated in Manchuria by the following incidents:—

- (1) The crossing of the Yalu.
- (2) The Taitsoho flank movement by part of Kuroki's army, 30th-31st August 1904.
- (3) The Hunho, 9th-10th March 1905—a particularly good illustration of the difficulty of reconnaissance across a wide open river-bed, even when the enemy is on the run.

The Hunho is exactly like an Indian river such as the Ganges or Jhelum.

(b) In hilly country when the enemy has outposts in the valleys and the hills are steep and difficult of access.

The ghats, south of Mhow, are illustrative of good country for this kind of problem.

The country round Quetta also affords excellent opportunities for the practice of mounted troops in this sort of work; in many respects it is similar to Southern Afghanistan.

Characteristic faults:—

1. Tendency to scatter on the part of patrols with the consequent loss of control on the part of leaders.
2. Undue anxiety to throw out flankers.
3. Aimless line of direction, instead of moving *en bonds* from point to point.

#### B.—CONTACT.

Problems of the action which a squadron, sent out through its own outposts before dawn to reconnoitre an enemy's outpost line should take.

#### C.—SCOUTING.

Problems for scouting parties.



A sparsely held cavalry outpost line is laid out—facing say north and some four miles long. A scouting party dressed differently from the troops holding the line is put in a covered position a mile or so south of this line, being supposed to have got there in the night. They are told to get back to their own troops which are north of the line.

A very characteristic fault of scouting parties coming in to their own lines from these expeditions is to forget to send one or two men well in advance; as a result of this neglect their own sentries shoot at them.

#### D.—FIELD ENGINEERING.

(a) Preparing crossings of rivers for troops coming up.

Some timber, ropes, rafts, boats, etc., are desirable for this problem.

Characteristic faults:—

Neglect to insist on tidiness with the men's arms, coats, etc. They should be put in a row and not here and there, so that they hinder alacrity later.

Neglect to post sentries.

Noise and unnecessary talking. Shouting across river instead of using semaphore.

Want of system.

Neglect to tell off suitable parties.

Neglect to write orders.

Neglect to test rafts, etc., and to look for careless lashings.

(b) Preparations of a farm, ruined house, village, river crossing, or bridge of boats for defence.

Characteristic faults:—As above and especially neglect to make a rough sketch to begin with and later to detail the defence.

*Note.*—"Duffers Drift" is a book every officer and non-commissioned officer should read, and Major E. F. Orton's book "Cavalry Taught by Experience"

#### E.—FIRE ACTION AND CO-ORDINATION OF FIRE AND SHOCK ACTION.

(a) Problems when to use long range fire to keep the enemy off as long as possible, and when to use ambush fire or to hold fire till he is quite near and annihilate him.

Characteristic faults:—Not to alter sights or not to use fixed sights. Bursts of rapid fire are the best way to mislead an enemy as to your strength.

(b) Problems which exercise the judgment of officers in what number of their command they should dismount and where they should put their horses, and mounted escort, if the latter is desirable; similarly problems which show whether they will put in all their strength and neglect to keep a reserve in hand.

(c) Problems where a sudden burst of fire is desirable (the straggling fire very common since volleys have been

discouraged permits a cavalry enemy to dash apart into open order and gallop at you or away to cover).

**Characteristic faults:**—Loud talking; sights not already adjusted and distance given. Men straggling into position and view instead of being kept well below crest line and got ready for action. Neglect to supply extra ammunition to firing line.

(d) Problems of getting into a position and simulating infantry in defence.

(e) Problems of removing dismounted men from a firing line, which is well covered from view, and moving to a place where you flank the enemy's firing line, etc.

**Characteristic fault:**—"Inaction."

"Cavalry should be all action"—"Inaction alone is disgraceful to cavalry."

(f) A squadron or regiment is told off to seize an advanced position against certain marked or flagged opposition.

When arrived there, it is threatened with annihilation by a strong force and is told to return.

Many problems can be made on attacks in which fire and shock are co-ordinated, these are obviously simple to make whenever some small position is available.

In a mounted attack a characteristic fault is not to extend the troops till after they are in view and under fire of the enemy.

As a rule, fire in support of an attack is most efficacious if it is "held" till just when the enemy open fire—as, though they may keep covered before then, they will certainly expose themselves when they commence firing at the attack.

#### F.—REINFORCEMENTS.

(a) The reinforcement of a rear guard by a squadron or troop of cavalry, before or during an action.

(b) The reinforcement of an attack (dismounted) whilst in progress.

The point to notice in this is whether the officer commanding the reinforcement reports to a senior in command, or if the senior takes over the command properly, receiving a report of the situation. Later the officer directing may let flags gallop at the defence and test its action.

(c) A squadron is sent to an isolated position and told to be ready for an attack from one, two or more quarters—the commanding officer is given a certain time to make his arrangements, then a flagged attack is delivered upon him. He is later told to withdraw with (or without) arranging for wounded, etc. If time is available he may be told to report his situation to a superior authority by signal, messenger, etc., and may arrange for a reinforcement coming to his help. Or he may be asked how, if no reinforcement is

available, he can simulate one. Answer—Send your own men out at night to march in as a reinforcement at dawn.

#### G.—NIGHT OPERATIONS.

- (a) A squadron or regiment is sent to get into a position before dawn from whence it can demonstrate against an enemy's flank without committing itself to an attack.

Later it is told to withdraw in face of superior force, or to attack as the case may be—

*Note.*—Mark the enemy's position overnight with flags or with skeleton troops.

- (b) An outpost line is told to withdraw at dark without disclosing its retirement.

Characteristic fault :—Not to light fires and leave them burning, or to take other measures to deceive the enemy.

- (c) A regiment or part of it is placed in an isolated position on the flank of an enemy's force and told to make arrangements for the night. It is attacked during night or at dawn.

*Note.*—(i) It may move after dark to another position near or shift its piquets, etc.  
(ii) It is good practice for scouts of another squadron to look for its position.

#### H.—DEFILES.

- (a) The unit is called on to pass through a defile where the strength of the opposition is unknown or is known.

*Note.*—Give diagrams before or after exercise of the accepted way of passing through a defile, i.e. :—Having established fire action on the most advantageous flank, the head of the column, after passing through the defile, wheels away from the direction of the fire action so established.

- (b) The unit is called on to execute a retirement through a defile.  
(c) The unit is called on to cover the passage of slow moving transport through a defile.  
(d) Problem of the defence of a defile—problem when to attack a superior force in its passage. The main point in this is that a force should not be stopped altogether from passing, but should be attacked when only that fraction which can be beaten has passed; whilst the mouth of the defile is closed by shock or fire action.

*Note.*—The defile may be simulated by flags if suitable ground is not available.

#### I.—REAR GUARDS.

- (a) Problems in rear guard actions.

Characteristic faults :—

- (i) To retire straight on the next point of resistance when the latter is held by rifle fire.

(ii) Neglect to send on an officer to scout the position at the next point of resistance.

(iii) No arrangement to mislead the enemy as to line of retirement.

(iv) To forget that the enemy may execute a parallel pursuit and consequently not to guard against this or at least observe it.

*Note.*—The best way to conduct a rear guard action is to go lightly out of two positions and arrange to "serve it up hot" to the enemy at a third position.

(b) Problems of rear guard co-ordination of fire and shock.

Characteristic faults :—

(i) Not to dispose the portion of troops told off for shock action so that it charges the enemy's attack in flank.

(ii) Not to tell off, before charging, a rallying point for the charging force inside your own line of defence.

(iii) Not to move to the next position, directly the enemy is repulsed, provided you have given time to the columns you cover, and so to avoid compelling your leader to pull you out.

(iv) To let the men rise up and retire, instead of moving back on their bellies, so that their movement is unseen by the enemy.

## J.—PURSUIT.

Problem in pursuit—after a night's rain.

The enemy's tracks have been lost overnight. Send patrols out on three or four different parallel lines a mile or so apart : then arrange a flagged enemy representing a force, superior to that engaged in scouting, covering a convoy—too much for those employed in scouting to deal with, unless a reserve is available. Characteristic fault in this case on the part of the remaining columns :—Neglect to march to the sound of the guns or musketry.

Good tracking problems should be made up.

## K.—DISCIPLINE AND ALACRITY.

In these problems officers and men should be kept in a state of suspense and tension for practice sake.

Problems of discipline. Officers must be taught to keep steady and unmoved under contradictory orders.

Problems trying officer's sense of discipline are easily made up. As a simple case, an officer is ordered to move to the right flank with his men, directly he has begun to move, he gets another order to go back, then he is asked why he did not move to the right by flag or helio.

Later at the conference he is told that this was done to prepare him and to test his steadiness and immovability. In war he may get such orders and very probably on an empty stomach.

Problems of alacrity, etc. These are easily improvised.

Troops are marched out to a point and, if cavalry, the horses are linked or put on rings (a stirrup iron will do) by half troops.

The men and officers are told they can ease off, smoke, etc., and can go anywhere within 100 yards.

After 10 minutes or so they are ordered to take up a position with the least possible delay at a distance suitable to the arm undergoing the exercise.

Characteristic faults :—Noise and shouting.

A squadron in marching order as above : some wounded men are brought in and must be taken home to barracks. Horses have been killed, etc.

Characteristic fault :—Neglect to have any stretchers or ignorance how to improvise such.

Problems to try the power of cavalry to shoot straight and mount quickly.

#### L.—RAIDS.

The incidents which might occur on any raid—on a railway line, *e.g.*, the demolition of a bridge or culvert, can be simulated by using dummy explosives. These should actually be fixed on the line. A more difficult problem is to fix them so as to evade detection by men patrolling the line and fire them at a stated time so as to derail a train.

Characteristic faults :—

Squadrons in marching order often neglect to take explosives (dummy).

Not always are a sufficient number of men trained in the use of explosives.

#### M.—INTERCOMMUNICATION.

Problems involving successful visual signalling intercommunication can be introduced into many of the foregoing schemes and this should be done when possible. Signallers are often inclined to think that their duties begin and end with sending and receiving messages correctly, whilst in point of fact a more important duty is to be on the alert to pick up distant calls from unlikely as well as likely directions.

Situations where an officer is directed incidentally to communicate to a superior the progress of affairs are important. In practice the officer not infrequently neglects to organize any means for securing such intercommunication or in the excitement of an action neglects to make use of such means as he may have organized. It will usually be advisable to detail a subordinate to assist him for this purpose—what may be termed a “sleeve puller.”

# THE QUALITIES ESSENTIAL FOR WAR IN HIS MAJESTY'S SOLDIERS IN INDIA, AND HOW BEST TO DEVELOP THEM.

BY CAPT. E. K. MOLESWORTH, R.E.

In discussing the subject of this paper, I propose first to consider the conditions peculiar to military service in India; then to state the qualities which seem essential in the different ranks of His Majesty's army for the successful accomplishment of the tasks they may have to carry out; and lastly to suggest the best means of developing those qualities. In the term "His Majesty's soldiers in India," officers and men, British and Indian, are alike included, nor will any distinction be made except when discussing qualities which appear essential only to officers.

It is scarcely necessary here to repeat the well known facts that India is as large as the whole of Europe less Russia, and that its population is double that of the Roman Empire at the height of its power; but it is essential to emphasise the enormous area our army has to protect, the extremes of climate, and the various classes of opponents that have to be overcome, the many possible theatres of operations in and out of India,—it is necessary to emphasise these points in order to form an idea both of the tasks our troops are required to accomplish, and of the qualities essential for the successful accomplishment of those tasks.

At any moment His Majesty's soldiers in India may be called upon to march and fight in the furnace-like heat of the North-West Frontier in summer, or in a temperature far below zero in the uplands of Tibet in winter, or in the continual rain and dense jungles of the North-East; down in the sun-baked, dusty plains, or up at heights of fifteen thousand feet in the snows—perhaps in a combination of several of these in rapid succession—or, again, they may have to cross the seas and fight in China, Africa, or wherever our Imperial responsibilities demand. The enemy may be a tribe of savages armed with bows and arrows, hiding in their jungles and behind their stockades, and projecting stone shoots down their hill-sides; or the Pathan ensconced in his sangar and picking off his enemy at a thousand yards; or African Dervishes, Tibetans, or Chinese; or—a foeman worthy of their steel—a first class European Power. To put it briefly, His Majesty's soldiers in India must always be prepared to defeat every sort of enemy in any kind of country or climate. This curriculum includes the whole duty of any European Army, and a great deal more. Indeed so gigantic a programme would seem impossible of human achievement, but for the comforting fact that it has always been carried out—if not triumphantly, at least successfully—in the past. If, however, the

Government of India are to feel prepared always to meet any of these contingencies, and to carry out with confidence their work of administration—in fact, “to keep the Hindu Kush and the Hindu Khush”—they must be backed by an extraordinarily efficient army, an army ready and keen as a hound straining at the leash. Smoothly as the work of administration seems to run, yet not all the politicians in the world could control the Indian Empire without an efficient army to enforce their decisions, any more than the “Mem Sahib” could keep the domestic establishment in such perfect order without the moral support of the “Sahib.” It is clear, therefore, that an army which remains efficient, even if seldom or never called upon to fight, fulfills its *raison d'être*; and we may take comfort, if we get less of active service than we should like, in the knowledge that by keeping ourselves and our units efficient, we also are doing our part in maintaining our Empire.

Having now indicated a sort of standard to which His Majesty's soldiers should attain, I pass on to a formidable list of qualities which seem essential if that standard is to be reached.

The first of these qualities, vitally necessary in all ranks, is “Guts.” I apologise for the word. In vain have I searched the Dictionary for a more polite substitute. Grit, heart, endurance, phlegm, daring, stamina, imperturbability—all these are contained in “that blessed word” GUTS, yet none of them is so comprehensive. In its defence I may quote the old English word “stomach,” used in such expressions as “he has no stomach for a fight,” which seems to indicate that portion of the anatomy as the seat of martial virtues, and sets a kind of historic seal on such an expression.

Let us imagine a regiment which has just left the comforts of cantonments, and is launched on a campaign on the North-West Frontier. The season being still uncomfortably hot, the regiment, on its way to the front, marches by night and halts by day. The start is to be made at 6 P.M. It has been a stifling day, too hot for sleep. Towards evening, while the transport is being loaded up the whole atmosphere is darkened by a blinding dust storm. It is impossible to see five yards in any direction, or to face the stinging sand borne along by the gale. Occasionally glimpses are caught of camels struggling to throw their loads, and galloping for their native hills, or of mules and drivers engaged in single combat. Above the roar of the storm are heard the bubblings and gruntings of the camels, the screams of the mules, the clatter of galloping hoofs, and verbal “appreciations of the situation” in half a dozen languages at once. The gale dies down, to give place to torrents of rain; and night closes in. Hours after the time named for the start, all the baggage and equipment has at last been collected, most of it now sodden and double its normal weight; it is loaded up in the darkness with the aid of a few hurricane lanterns, and the regiment moves off. Yesterday's dust is replaced by seas of mud, and slight depressions on the road are now waist-deep

streams. Through it all, hour after hour, the men trudge on. They were supposed to reach their destination at mid-night, but it is long after that when a prolonged check at the head of the column indicates that at last they have got there. The camping ground cannot be seen in the dark, but seems to be a bare space several inches deep in mud. As the tents are still a long way behind on the slow-moving camels, there is nothing to do but wait. The ground is too wet to sit upon, and the men remain standing. Occasionally some one falls asleep and wakes to find himself falling or perhaps already in the mud. Then the rain, which had stopped for a bit, comes down with renewed energy.

Distant sounds, however, announce the approach of the belated transport, which presently splashes on to the camping ground. It takes some time for every man to secure his own kit in the dark, and for a few tents to be pitched in the mud. Then the men lie down on the sodden ground and sleep the sleep of pure exhaustion—all except the sentries, who, even though the regiment is not yet at the front, must keep the sharpest look-out for rifle thieves and other marauders. Dawn comes at length, revealing a cheerless encampment dotted with groups of bedraggled men trying to light fires at which to cook their food. "The King's Own Light Infantry" would scarcely be recognised by the friends who admired them so much on the ceremonial parade at Calcutta last month.

All this may appear an exaggerated description of the discomforts of a night march; but those who have served on the Frontier, even only in piping times of peace, know that such an experience is a very ordinary one. Many, indeed, could describe similar marches substituting for the rain a snow blizzard on some mountain pass, the thermometer below zero, and the snow drifts bringing the transport to a standstill.

The regiment is not yet at the front, no shot has been fired, but we had better pause to indicate the qualities which will bring it thus far without loss of efficiency.

On the morning after such an experience, the good regiment will very soon have cleaned itself up, dried its clothes, eaten a good meal, shaken itself out, and be ready to march anywhere and do anything; while the bad one will present a spectacle of shivering men reporting sick, and the colonel will feel like Job receiving message after message of evil tidings.

What qualities, then, are necessary in all ranks if a regiment is to come unscathed through preliminary trials of this sort? Undoubtedly the first of these is Guts. The keenest soldier cannot *like* this sort of thing; but he who has this quality will win through cheerfully, while he who has not will crumple up. To some extent "guts" are born, not bred, and happy is he who is born with them; but they can be developed even in most unlikely subjects. The officer, by keeping himself physically fit, by thoughtful study of similar historical instances, by impressing upon himself that such experiences are all in the day's work, by a determination never to



be found wanting himself, by never shirking necessary hardship, can increase his own powers in this respect. He can develop the quality in his men by his own example, by instilling into them the necessity for undergoing these discomforts, by telling them of the historical instances he has studied, until they too feel that such experiences are all in the day's work,—above all by steering them through such trials, and proving to them how quickly the good regiment can shake itself out and go on its way.

The second essential quality is **PHYSICAL FITNESS**. So much has

**Physical fitness.** been written on this subject that, even if it were practicable, it would be needless to recapitulate it here. A few points of special importance may, however, be mentioned, and the first of these is a *good digestion*. All sorts of ill-cooked

food will have to be hurriedly eaten at odd times, and very likely the painful experience of semi-starvation may have to be endured. An interior economy that acts like clock-work will here prove invaluable. I believe this can be obtained by almost anyone who will give up a few minutes every morning to physical exercise. To any who do not know of it already, and who are willing to give up 15 minutes daily for the sake of always being fit, always feeling the *joie de vivre* and always having every organ in perfect order, I strongly recommend Müller's "My System." To others who will be content with merely a good digestion, I recommend a couple of minutes' exercise for the development of the abdominal muscles, before getting out of bed. Lying on the back raise the toes until they are vertically above the waist; similarly raise and lower the body; thirdly, drawing the knees up to the chest, kick slowly out to the full extent. To do each of these exercises half a dozen times takes about a minute. It is easy to form such a habit, and the habit will, I believe, build up that priceless blessing—a good digestion. To pass the blessing on to the men, such exercises should be included at Physical Training parades, and these should be held daily, a quarter of an hour's physical exercise every morning being vastly more beneficial than, say, an hour once a week. This diatribe may seem out of place, but as a sound digestion is the foundation of all physical fitness, I make no apology for it.

Another invaluable means of keeping fit is regular walking exercise. To make a point of walking 20 miles or more once a week is the best health insurance I know. I know also that it is useless to recommend such a practice. To the average officer in India walking is an abomination; and many could not spare the time. The tedium of the walk, however, can often be relieved, or altogether banished, by carrying a gun, and a weekly shoot is even better than a weekly walk. Since there is no means of becoming good at marching except by marching, the men must be kept at it. Not only will regular marches keep them fit, but it is essential that they should be able to march well—essential because if they cannot march they are of no more use on service than a lame horse or a gun without ammunition. It is not unpleasant to

take the men for a long march even as often as once a week. It is one of the best means of getting to know them; and a long halt and a hot meal in the middle of the day halves the fatigue and adds to the enjoyment. Right out in the clean country air, away from the petty worries of the office and the incidental items that seem to fill the time in cantonments, one gets the men all together and learns about them and their customs. Then on return to quarters they learn the advantages of a bath and a change. To those who love the open country, and feel the fascination of "the white road and the sky," I recommend regular marching with the men as one of the best roads to health and to military efficiency.

Only one more note will I add on the subject of keeping fit, and that is on the extreme importance, especially in this country of avoiding a chill. After getting wet, whether from perspiration, rain or snow, the sooner one has a bath or a rub down and a change, the better. A fruitful source of a vast amount of "seediness" is the habit of sitting under a punkah after tennis, or hockey, or polo; or in the case of the men, lying about after a game or a march, instead of changing at once. In this matter they have to be driven. Many men, after working all day in snow or slush, will, unless forced to rub down the feet and put on dry foot-gear, sit or lie about in the evening until the seeds of pneumonia are sown. Attention to this, both in oneself and the men, will save a deal of sickness. But it means continual effort and continual driving.

I may remark here that any such qualities as those already mentioned, which are necessary to bring the regiment even thus far, are necessary in a far higher degree to bring it successfully through the campaign.

We may imagine now that the regiment has, through some preliminary tribulation, reached the advanced base. This consists of a huge, hot, dusty area, covered with acres and acres of tents, commissariat bales, ordnance stores, latrines, incinerators, mules, horses, camels, kits, vultures, kites, notices forbidding everybody to go anywhere or do anything and officials far too busy and heated to answer questions except with a gruff monosyllable. At last, however, dusty, tired, and hot the regiment reaches its allotted camping ground, an unpromising looking spot; and unloads itself. There is much to be done, and little time to do it. The officer who has neither had experience, nor taken the trouble to picture the scene or think out what there is to be done, feels lost, and, not knowing where to begin, is likely to give way to his exhaustion and do nothing. His opposite, however, having issued clear orders about the interior economy of his unit, the drawing of rations and stores, the time of the next parade, etc., goes off to consult the representative of the General Staff with regard to the future.

Before passing on, it is only necessary to mention that the additional qualities required in the officers for this stage of the proceedings are experience, or, failing that, forethought, which is as good or better, and energy.

**Forethought.**

I believe some one once said that, with half an hour's start, he could teach anyone anything. The officer should keep at least that half hour's start in all his business; but the only means of making sure of it is to develop the habit of forethought, born of genuine professional keenness. This habit not only saves the men endless wear and tear, but begets confidence in them. If, on a new situation arising, the men find that the officers are fully prepared for it, they will look upon them as their natural leaders. The quality is perhaps developed best by forming the habit of pondering the conditions of active service, making mental appreciations of all sorts of situations, tactical and administrative, and considering the action to be taken in each case. This again implies energy, which can be developed but not created. The

**Energy.**

officer who has none had better seek employment "where epileptic fits don't matter"; but he who has it, even as a grain of mustard seed, may multiply it by interesting himself in his work. Wellington, it is said, when he entered the service, hated military life, but felt he had better do his best to master his new profession. So he started by weighing a man in marching order; and the enormous weight of the kit—80lbs. or more in those days—gave him food for reflection, and began to interest him in his new life.

For want of space we must now skip several days, and imagine the regiment fairly launched on the campaign. The advance from the base has been more fatiguing than the previous marches, because military precautions have been necessary all the time, day and night. Rumours are afloat in the ranks that seventy thousand of the enemy are in ambush just beyond the next defile, to annihilate the emerging troops. Perhaps nerves were jarred by one of the men falling in the ranks with a clatter, and clutching the ground—killed by an unexpected shot from an unseen marksman. Perhaps the atmosphere of the officers' mess at dinner was disturbed by one of their number falling forward over the table from the same cause. It is very cold, or perhaps very hot, or very wet. Everyone is beginning to discover that "the show" is not the picnic that was expected.

But now there is some real fighting to be done. An officer finds himself, for the first time in his life, in command of his unit, with a real though invisible enemy somewhere about, and with orders to capture that hill and establish a piquet there, or drive the enemy from that scrub, or merely to "brush aside" any opposition and continue the advance.

Suddenly the air is filled with a noise like the cracking of whips, reminding him of duty in the marker's butts. Here and there a man falls, and the rest take cover and open fire in the supposed direction of the enemy. He realises he has lost several men, and experiences a hazy feeling that it must be a dream. Thus, as more men fall and the stretcher bearers begin to carry wounded men to the rear, he begins to feel that he has failed, and perhaps wonders if there will be a question in the House about it. Finally, he sends back an

urgent appeal for reinforcements, reporting that he is held up by a superior force. Presently some fresh troops come up at the double, led by a dashing sportsman who has never funkcd anything. The bulk of the first attack are drawn into the second, and the whole charge straight ahead. The dashing leader falls forward and does not rise, and the attack withers away. A third officer, some way in rear, has a good look at the country through his glasses, and observes that by moving off to a flank, he can get his men up to what appears a more advantageous position. Having explained his idea to his subordinates, he moves his command off; and making use of every fold in the ground, every copse, every boulder, they work their way forward until they find that only a short open space separates them from the enemy, now showing themselves here and there. The men collect behind the last pieces of cover. The officer leaves a party to keep up a rapid covering fire, and dashes forward with the rest at full speed. Perhaps they drop down prone after each rush until they get their breath, then spring forward again as if starting for a race, or perhaps one rush carries them into the enemy; but they will not be denied, and the position is won.

What qualities did this last officer possess that made his attack succeed where the others had failed? The first officer was lacking in "guts" and in the offensive spirit; the second had these, but had no "eye for country"; the third had all these, and used them; more, he had imbued his men with them and trained them well.

The *offensive spirit*, which should pervade all ranks from the field-marshal to the private, how can it be developed? With the Officer it is largely a matter of logic. Given any piece of work to do—an enemy to be defeated, an examination to be passed, a tournament to be won, a "bandobust" to be made—it is clear that he who attacks it with his whole soul is likelier to succeed than he who takes counsel of his fears and seeks a safe course. The officer must, therefore, work out his own salvation; and must instil the offensive spirit into his men. Drive it into them in the field and in the lecture room, that "to go for your man" is the only true course; teach them that when given a job it is unworthy of them to consider how little work they may safely put into it, but that the right spirit is to do it with all their might; demonstrate to them that in tactical exercises, in games, in sports, the men with the offensive spirit are the men who win; and if, with all this, the offensive spirit does not grow in them, they must be poorer material than even the "mud" that could be charmed into riflemen by the invaluable Sergeant What's-is-name!

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across country, walking, even fishing—all these will develop it in an observant subject; so also will field days, tactical exercises, manœuvres. If the men are kept in the open and taught the use of ground, better still, if they are taken out shooting and fishing as beaters or orderlies, they too will soon develop an “eye for country.”

To return to the fighting regiment, perhaps the next situation is a general action. All ranks have been somewhat thinned by sickness and the enemy, and even the most junior officers are beginning to find “greatness thrust upon them.” A general attack is in progress. The regiment on their right is held up, and can only advance if a heavy covering fire is brought to bear by the “King’s Own.” But the two regiments were not friendly in cantonments, and why should the others get all the “Kudos” for the attack when they cannot advance without the help of their rivals? The petty and unworthy thought is instantly dismissed, and the two regiments co-operate loyally for the common good. This phase passes; and in the next, a party of the enemy is seen to be making for an advantageous position on the flank. It is touch and go whether it is possible to get there first, and woe betide the losing party in that race. Instant decision is required—whether to dash for the objective or retire out of its range. In the next phase, perhaps, the excitement dulls down, and everyone gets very weary; but victory has not yet been won, and the men must be driven on if necessary. In some places the fighting line has become much attenuated, and small groups, even individuals, find themselves alone, without any clear idea of the situation. Night falls and pitch darkness accentuates loneliness. Perhaps the night is a vile one, bitterly cold or soaking wet. Sudden bursts of fire—no one knows whether from friend or foe—keep most nerves on the stretch. Each group feels that it may be attacked at any moment by overwhelming numbers, and everyone longs for the dawn. This comes at last, and discloses new situations to be met with energy by officers who already feel completely “used up.” Perhaps they have before them another day, several days, like yesterday. The qualities required to carry all ranks through this phase include all that have already been mentioned—and these in an ever increasing degree—and more besides.

The first of these is *loyalty*, the spirit that will sink all petty differences and work only for the good of the Empire. I do not call it *esprit de corps*, for I think we hear rather too much of this; the *esprit* that goes no further than the regiment is too parochial, not worthy of a soldier of our Imperial Forces. The truly loyal officer must above all things beware of becoming “a man on the make,” or “out to get on”—we all know the type—the man whose only object is to push himself, who takes the credit for everything that goes well, from a fine day to a good march by men he has not trained; the snob who may make himself indispensable to his seniors but is loathed by his juniors. Unfortunately, ambition;

a splendid quality in itself, is apt to lead men into this path; but as such a man is incapable of loyal co-operation where he can get no personal credit, we may without hesitation stamp him as bad, and hold him up as a warning. Loyalty in the Indian soldier is perhaps synonymous with his excellent principle "to fight for him whose salt he has eaten," a principle to be encouraged. The sepoy's pay means much to him, and the Persian proverb which may be freely translated—

"If the Sirkar cuts the Sepoy's pay,

The Sepoy "cuts his name" that day, shows deep knowledge of the Eastern soldier. See, then, that he gets his regular pay with as few "cuttings" as possible. Encourage that personal loyalty as strong in Eastern minds, that loyalty which will preserve as a sacred emblem a medal that has been touched by the King, that loyalty which requires an object to reverence, and looks on "pomp and circumstance" as the outward and visible sign of power; and remember that the "Sahib" is the representative of the "Sirkar."

The next essential quality—which enabled the officer to foretell the enemy at the important, perhaps decisive, tactical point—was *quick decision*. By a quick decision Wellington won the battle of Salamanca. In a few seconds he dictated orders which turned a retreat into a decisive victory. But "the tree was planted to bear such fruit." It was long years of study, study of strategy, of tactics, of his troops, that enabled him to give that lightning decision.

**Quick decision.**

Another quality essential in the circumstances described—though the illustration was inadequate for a quality so important—is *mobility*. Officers and men must be ready to move anywhere at a moment's notice. For the officer, this means that in addition to being physically fit, he must, if a mounted officer, be a good rider and horsemaster, and must have a complete kit. Many good riders, never having attempted to water, feed, or saddle their horses, are practically helpless without their syces; and cannot, therefore, be called *mobile*. A field officer, pulled out from some administrative office to umpire on manœuvres, seen pushing his bicycle across a ploughed field because he has no horse, and looking like an owl in the daylight, is, to put it mildly, immobile; so also is the officer who, on being ordered into camp, proceeds to borrow from his unfortunate friends, tent, bed, table, lamp, valise, chair, and canvas bath.

The kit of the men, on the other hand, is too well looked after by their superiors to be as a rule incomplete; and they can be made thoroughly mobile by frequent marches and bivouacs, by short, rapid tactical efforts in the open country, and by physical training carried out on common sense principles.

Yet other qualities demanded by the last circumstances are *moral and physical courage, self-reliance, driving power, intelligence, and imperturbability*.



*Moral courage*, required particularly in the officer, is apt to die an early death either at school, where a boy dare not tilt his cap at an unfashionable angle; or at our military colleges from similar causes; or even in some messes where anyone who strikes out a line for himself is looked upon as an outsider. No sensible person, however, can object to the practice of putting in their proper places youngsters who arrive with "swelled head"; and it is merely the overdoing of this principle which may do harm. It is not easy to find a recipe for the development of moral courage; but the only way to become good at anything is by determination to excel and by constant practice; and the officer who fearlessly takes what he believes to be the right course every time will certainly develop this quality, and will not be found taking counsel of his fears at a crisis. So constant, both on manœuvres and on service, are the opportunities for inaction that the officer who has the moral courage *not* to take them, deserves all encouragement.

I would, however, qualify these remarks by adding that the officer who annoys his fellows in everything he does, must have something radically wrong with him.

Closely allied to moral courage are *self-reliance* and *imperturbability*. The former is born in some sturdy independent natures, while in others it must be developed gradually. Circumstances may breed it—the man who has been much "on his own" is sure to have it. Others can develop it only by never shirking independent work, and never looking to another if it is possible to find the solution in oneself. The men, too, should be grounded in this principle, and not dry nursed.

*Imperturbability* is perhaps wholly included in *guts*. It is a very necessary quality in all ranks, and will bring its possessors unscathed out of trials that would demoralise others. Some natures will always worry, and cannot develop this quality; but most, by learning to view things in their right proportion, will learn to take them calmly. The officer who almost throws a fit at the sight of a "reminder" from the Staff Office, or works himself into a frenzy at a field day, will certainly not make a Nicholson, who kicked an important file across the floor to show his contempt for "babuism"! Nothing but broad-minded study of men and things can develop a right sense of proportion; but once developed, this sense will, combined with physical and mental fitness, form that invaluable quality, *imperturbability*. Any officer who possesses it is capable of teaching the men to take calmly such things as *they* ought to take calmly.

Of *physical courage* I need say very little. It is, fortunately, the birth-right of the Anglo-Saxon race; nor is it wanting in most of the alien classes we enlist. Where it is not born in a man, training and discipline—described by Scott as instilling into the soldier a greater fear of his officers than he has of the enemy—may do much to supply the want

still more can association with brave men, and the man who knows that his officers will never "funk" anything, will catch a spark of courage from them. A vital quality, essential in all ranks, and without which the others are of little avail, is *intelligence*.

An officer, if he is to give clear orders to his men, must be very clear in his own mind as to what he wants.

**Intelligence.**

Here again nothing but quiet thought and study can help him. "A soldier who has never considered how, or why, Napoleon triumphed over his opponents, and when and why he failed, would have very little chance of solving aright the problems of a modern campaign." \* *Beatus qui rerum causas noscere potest.* The soldier who, however, remains in his study does about as much good with his men as a religious recluse may do in the line of missionary enterprise. What is wanted is a happy combination of theory and practice, of quiet thought and strenuous action—in fact, to take a cue from Mr. Squeers, to learn how to spell "winder," and then go and clean one!

It is, of course, impossible for any officer to train the individual intelligence of every man under him; but he can train his four or five immediate subordinates, and these in their turn can train theirs, until the complete chain, from the commander-in-chief to the private or sepoy, is established. Much can be done by interesting the men in their profession, demonstrations on sand models, illustrated lectures on campaigns, stories of "deeds that won the Empire," visits to battlefields, instruction in the regimental history—the only difficulty is to find the time.

To test the men's progress, casualties on an ever-increasing scale should be practised during tactical exercises, until eventually men find themselves widely extended and without leaders, with no guide but a general idea of the object of the exercise. At first this may bring the operation to a premature close, but if the proper course is afterwards explained to them, the men will improve rapidly and develop intelligence and self-reliance.

**Driving power, determination, perseverance.**

There still remain the qualities of *driving power, determination and perseverance.*

The last stage of the campaign is perhaps a withdrawal in vile weather, down a sodden valley, with an enemy hanging persistently on to the rearguard and flanks; or perhaps months and months of lonely work at some Frontier outpost, or on a block-house line. The excitement of the campaign is over, perhaps "the captains and the king's" have departed, and all ranks feel thoroughly "fed up." Some of the men, hitherto capable of being led and encouraged, can now only be driven; and invaluable is the officer who still has the driving power, the determination, the perseverance, to bring his men successfully through this last stage. These qualities will be bred by the others. In

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\* "War," by Sir J. F. Maurice.

fact, I believe half of those already mentioned are inseparable from the other half, so that the list is not really formidable as it looks.

We may now leave the campaign and the regiment, the latter, let us hope, feeling the truth of the words, spoken, I believe, by Lord Kitchener at Cape Town, to some departing troops at the end of the South African War—"You have tasted the salt of life and you will never lose its savour."

In the foregoing pages I have tried to indicate the qualities essential for war in all ranks of His Majesty's **Officers.** soldiers in India. In conclusion I propose to take a higher flight, and deal with the qualities essential only in officers.

So heavy are the obligations of the officer, that qualities merely desirable in the man are essential in the officer, and qualities essential in the man are of vital importance in the officer. The man must have the courage to risk his life for a sufficient object; the officer must have the courage to risk his whole command; and the same proportion applies to all the qualities they should possess in common.

The officer is the leader, the driver, the brain, the power house. If he is working efficiently the men will not fail; but if the power station fails, the lights go out and the motor stops. If I have seemed to lay undue stress on the qualities of the officer, it is because these will be reflected in the man; and first class officers will carry even indifferent men successfully through situations in which badly led troops, however good in themselves, will fail. To quote Napoleon: "*Men are nothing; the man is everything. An army of stags led by a lion is better than an army of lions led by a stag.*"

What can an officer do in peace time to develop these lion-like qualities, and kill any that are stag-like?

To revert to the analogy of the power house, he must "run" himself efficiently and economically. No steam engine, no dynamo, no motor can be run continuously on the top speed. This must be reserved for great occasions. There is a certain economical speed which, without wearing out the machine, gives a maximum of efficiency and economy. This is the speed at which the officer should "run" himself, reserving his top speed for a worthy occasion. For this reason the officer who, while he works hard, yet takes his leave and enjoys it, is probably more efficient than he who never takes his leave. The economical speed, however, is not such as will just keep things going with the legal minimum of work. It is a high speed, and one that makes progress; the maximum speed consistent with the ability to enjoy, after a good day's work, the evening's recreation.

Having then fixed his speed, how is the officer to direct his work to the best advantage?

In an address to the students at the Staff College, General Robertson, the Commandant, concluded his remarks with these

words: \* "Finally remember that when the day for fighting comes, the qualifications demanded of you, whether on the staff or in command, will include, in addition to a good theoretical knowledge of your professional duties, the possession of a quick eye, a good digestion, an untiring activity, a determination to close with your enemy, and a firm resolution not to take counsel of your fears."

The quick eye, the good digestion, the untiring activity, the offensive spirit—these have already been mentioned. How can a good theoretical knowledge of professional duties be obtained? Only by study. "I challenge you, in all history," wrote Ruskin, "to find a record of a good soldier who was not grave and earnest in his youth. Many a giddy and thoughtless boy has become a good bishop, or a good lawyer, or a good merchant; but no such a one ever became a good general."

There is no excuse, these days, for want of interest in our work. The military profession, now that scientific investigation is applied to it, and work is done on common-sense principles, is not the artificial affair it was thirty years ago. "The born soldier" of the military novel is nowadays an anachronism. This dashing and immaculately dressed officer, however capable of directing the volley firing of his men at Waterloo, would find the "appreciation of a situation" perhaps an insoluble problem. "The born soldier" has given place to the worker and the student, the man who begets ideas in quiet thought, and applies them in practice; who so trains himself, that when dashing effort or quick decision is required, he will not be found wanting. The excellent libraries and the mass of first class military literature so readily available, afford ample opportunity to those anxious to study their profession. Very different is this from the state of affairs before what may be called our military "reconnaissance," when good military literature in our language was hard to find. The officer to-day who chooses to "scorn delights and live laborious days," is not rewarded only if the opportunity of active service comes his way, but the results of his labour, apparent in himself and his unit, are ample reward. Then as regards the "firm resolution not to take counsel of your fears." What makes a man take counsel of his fears? Want of confidence in himself, due probably to the fact that he has neglected his work. The colonel who for a week before the general's inspection goes about almost wringing his hands and cramming up statistics about the regimental soda-water factory and the price of the men's socks; the staff officer who, even in normal times, continually worries regiments with "very urgent" and "immediate" letters because he has neglected to take action while there was plenty of time, and who is looked upon by the regimental officer, not as a help, but as a hindrance; the regimental officer who does not know his men or their powers, and who, instead of doing things, has to get out of the way while things are being done,—none of these could be expected to take counsel of

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\* "Army Review," April 1912.

ought but their fears. But the man who does his work, though he be not brilliant, has no cause to fear anyone or anything, but may safely "down" his fears and take the bold and optimistic course.

To become and remain ready for active service, each officer might set himself a standard, and determine to maintain it. The standard should include such tests as he might have to undergo on service. In general terms, to quote Sir Ian Hamilton, "to keep absolutely fit in mind and body" is the standard required. To suggest details, to be able at any time to walk forty miles, or ride the same distance; to have all camp kit ready for a move at a moment's notice; and to keep the minds fresh by, say, half an hour's professional reading every day—some such standard as this will insure instant readiness and fitness for active service.

Lastly, if officers believe, with Lord Curzon, that the British Empire is, under Providence, the greatest instrument for good that the world has ever seen, and that its work in the Far East is not yet accomplished, they will have abiding satisfaction in the conscious performance of their part in the greatest work Providence has ever set an Empire to perform.

It will not, I think, be out of place to conclude with a brief epitome of this essay, which may be summed up as follows:—

Most officers have the intelligence to develop in themselves what qualities they choose. For war the most important seem to be—

"Guts."	Intelligence.
Physical fitness.	Forethought.
The offensive spirit.	Energy.
Eye for country.	Quick decision.
Mobility.	Moral courage.
Loyalty.	Perseverance.
Self-reliance.	Determination.
Imperturbability.	Driving power.
Physical courage.	

Of these, at least the first ten are essential also in the men. Possessing them himself, the officer can, by training and instruction, by encouragement, by example, and by association, impart them to the men under his command. Such a standard may seem unattainable; but the higher the standard, the further are we likely to advance along the way towards it.

## FROM BENEATH THE HARROW.

BY CAPTAIN B. G. PEEL, 81st PIONEERS.

Although as Kipling truly remarks,

“The toad beneath the harrow knows”  
Exactly where each tooth-point goes,

it would be asking too much of the long-suffering reptile—or is he an animal?—to expect him to know all that influences the man who guides the harrow.

It is with the consciousness of similar limitations that the following remarks are made.

The pendulum, which reached its limit just before the Boer War, has now swung very far in the opposite direction, and every year sees more demanded of the soldier from general to private.

The old days—many heretics still think, the good old days—of “Steady drill, gentlemen,” are gone and most of us are schoolmasters one week and schoolboys the next—instructing, learning and instructing again throughout the training year, with holidays, alas! growing steadily fewer.

Competition is excellent, but any trainer, whether of man or beast, knows that excess of competition makes the pace too hot to last. Competition however is the spirit of our training to-day, with the result that everyone makes the pace a little hotter for those beneath him, and by the time this filters down to the ranks, it is all race and no breathing space.

Now with a long-service army it seems that we could well afford to take things a little slower. At present a year's work for the rank and file and junior officers with its individual, section, company or double-company, regimental, brigade and divisional training, not to mention musketry, practical and theoretical, scouting, physical training, bayonet-fighting, sanitation, first aid, elementary engineering and professional reading, is frankly too large an order.

The result is that in stations where there is a long hot weather, some of these are scamped; in the other stations a man comes back from divisional manœuvres on Saturday, starts his next season's section training or annual musketry course on the following Monday, and gets thoroughly stale.

There is a certain grim humour in going through the various Training Manuals, Regulations, Hand-books, Pamphlets and Memoranda which are sprung on the Regimental Officer from time to time, and noticing in how many forms of training almost daily practice is recommended, and indeed necessary, to attain the standard laid down by their enthusiastic authors. The Regimental Officer knows, of course, that it is just the specialist quickening up the pace for those below him, and if he is wise he takes them all with a grain of salt and does his best to comply without losing his sense of proportion. He fits in a week on end at one, he does another

once a month or once a quarter, a third whenever he can find an off-day, he reports that "Instruction has been given," and he knows perfectly well that he has not had enough time to make a really good job of any one, except at the expense of something else.

All this disheartens the officer, "feeds up" the soldier and does not produce the good all-round man.

And the root of the evil seems to those beneath the harrow, at least, to lie in the fetish of the training year.

There seems no conceivable reason why everything should be crowded into a single year. There may be good reasons known to those at the top, but they are not obvious to the men who do the work.

Why not a "Training Period" of two years and then start at the beginning again?

We must, of course, divide our training period into years for financial, statistical and other reasons, and the proportion of work for each year could only be found by trial. Let us say for the first year individual, section, company or double-company and a *short* battalion and inter-battalion training, with the annual musketry course and the usual "side-shows."

In the second year the annual musketry course or preferably a "special" course, mostly off the range, a *short* company training, battalion, brigade and divisional training, all on much wider lines than at present, with the "side-shows" as before.

It may safely be said that time would not be wasted, although the pressure would be lower, while there need be no more perfunctory scamping of minor points, for sheer lack of time.

To give one instance, a company or double-company commander can seldom give the time he would like to the extra training of his company scouts and non-commissioned officers. With the extra time at his disposal he would be able to produce much more satisfactory results. Half the army could do the first year, while the other half was carrying out the second, so that every year double the present amount of money would be available for really big manœuvres by those engaged in the second year's course.

If the Regimental Officer had the temerity to criticise the staff, and he sees a thing or two from below sometimes, it would probably occur to him that the staff of his Brigade and Division would find useful instruction and practice during their first year by taking part in some capacity or other in the second year operations of another Division, not to mention the staff tours for which in the first year there would be ample time and in which he might be allowed to take a humble part himself.

The scheme is, of course, capable of development at great length, but to return to our friend the toad, there may be considerations unknown to those beneath the harrow which would render it impracticable. Enough to say that the tooth-point goes somewhat deep at present and the reptile would welcome a little consideration of the idea here put forward.

## JAVA : THE GARDEN OF THE EAST.

BY LIEUT. F. G. C. CAMPBELL, 40TH PATHANS.

Having recently paid a fleeting visit to the Dutch East Indian possessions, the following jottings from my diary may prove of interest to some of your readers. With more leisure these notes would have been ampler, as the Dutch military officers and civil officials are most courteous and willing to assist one in every way.

The first thing which strikes a touring Britisher is that the local Dutch representatives of a small but proud nation, have a great opinion of their method of government, and of their military system in the East, which they consider greatly superior to ours. Further no outsider can help observing the natural manner in which the Hollanders intermix with the Javanese. They intermarry with them and treat them as equals in every respect except that they close the doors of the Dutch East Indian Civil Service to them. The class in India to which we apply the term Eurasian is there styled Hollander. Throughout the country it is evident that a very good understanding exists between East and West, due no doubt in some degree to the high intelligence of the Javanese, coupled with an innate respect on their part for the European. Perhaps, too, the fact that the Dutchman usually makes a home of the island for all time has something to do with the good feeling that exists between rulers and ruled.

The Dutch military officers are intelligent, well-educated gentlemen, but I do not think it an unfair criticism to say that the knowledge which they display is often more of a theoretical than of a practical kind. At their military academy in Holland, where they pass, I understand, four years, they cease studying European languages and general military history as soon as they elect for service in the East, and specialise in East Indian history, Malay and Javanese. Thus they come out well equipped with a knowledge of the country and people, ready to command native troops. Once out, however, they pay greater attention to studying etiquette and the likes and dislikes of their seniors than to getting to know their men. This aloofness and indifference towards the private soldier is rather enhanced by the existence of general lists for Cavalry, Artillery and Infantry, resulting in officers never knowing what their next corps will be or for how long they will be with it. Officers are liable too for duty in out-of-the-way places in quasi-civil capacities. Promotion in the Army is slow, on the other hand the leave rules are liberal—one year in Europe after five years' service. With regard to the pay and emoluments, officers appear to be quite as well off as those of the Indian Army, if one takes into account various allowances and indulgences, such as free quarters, free passages home, and the absence of mess subscription.



As to the rank and file. All units are mixed in the rough proportion of one European (or Eurasian) to three Javanese. The equipment of the two classes is identically the same except that the Europeans wear a short sword. The usual uniform is made of blue serge, the head-gear a brown straw hat; but on the departure of a unit on active service khaki uniform and helmets are issued. Bayonets are always carried fixed. If this is, as I understand, with a view of impressing the native population it appears a very unnecessary measure, as the islanders are quiet and law-abiding. In some parts men, and women too, carry krises as part of their national costume. The Dutch East Indian soldier is the wastrel of Holland who only volunteers for service in the East when all other jobs fail. The Javanese are enlisted rather for their docile tractable qualities than for any love of fighting. Their term of enlistment is for six years and service is so popular amongst them, in spite of the small pay, which is about half that of the Indian sepoy, that men generally re-engage to serve for twelve or even eighteen years. The best native troops come from the island of Ceram. These receive the pay and are given the status of European troops, and are allowed to rise to the commissioned ranks. The distinctive status of the European soldier does not seem to extend further than living in separate barracks and being permitted to wear the short sword mentioned above. In the ranks they are mixed with natives, they travel in third class railway carriages, and are at all times liable to be commanded by native non-commissioned officers. From what I saw I cannot think that the Javanese rank and file are as fit, active, and ready for service as the men of our Indian Army, although they gave me the impression of being generally more intelligent. Every individual can read and write on enlistment. The mixed class system seems to work well. The very strict discipline which is maintained may be the secret of this being so. At the same time it is questionable whether the punishment awarded always fit the crime; *e.g.*, two flogs of punishment for trivial offences are—cleaning the latrines and being prohibited from looking an officer in the face for a period of three months.

The principal military stations are Batavia, Tjimahi, the military "Centrum" and sanatorium, Djockjacarta, Solocarta, and Soerabaya. At Tjimahi, which is some six miles from Bandoeng on the rail to Batavia, is the first mountain battery of the new composition, its armanent being four Krupp guns.

The small wars in New Guinea and Sumatra seem endless and are not taken very seriously by the authorities, but regarded more in the light of training for the real thing. A Dutch subaltern of eleven years' service, the possessor of two medals, told me that though he had seen "much shooting and shouting" he had spent most of his service in a fort. This in Sumatra *Manœuvres* in Java seem unknown, and the splendid terrain for practising warfare is wasted. Occasionally I met officers in the most unexpected places engaged on what appeared to be a "staff tour." I cannot

help thinking that I was an object of greater interest to those whom I thus came across than the work on which they were engaged.

As the nature of the fighting in Sumatra and New Guinea is all bush warfare, the transport question is a difficult one. Until lately this was solved by the employment of convict coolie labour, and the system worked very satisfactorily. Perhaps it is not so surprising that there were no desertions from among these convicts when it is remembered that the Papuan of New Guinea is a cannibal. The Dutch do not appear to give much consideration to the possibility of war operations taking place in Java itself, so the necessity of sticking to the roads and railways does not worry them. The principal roads are splendid. The railway service on the other hand leaves a good deal to be desired as at present trains are not run at night. This is to be remedied, so it is said, next year when one train at least is to run through from Batavia to Soerabaya in the twenty-four hours. At present the journey must be broken at Djockjacarta. But for the railways, and for the good roads and the steam trams which run along them, coolie transport would be imperative. The whole of the eastern half of the island consists of impassable morass and paddy fields, and the western, more mountainous part presents if anything still greater difficulties to free movement. Yet curiously enough, in spite of two hundred and twenty days rain in the year, the climate is good, only the seaports being fever-stricken. Off the main road three bamboos serve anywhere as a bridge, a German building pukka bridges all over his property caused much amusement as no vehicles or animal transport ever made use of them.

Rations for the troops are all ready packed in tins containing three days' food per man. These however are never issued but for active service. Apart from his arms I never saw a soldier carry anything additional except his cape and a water-bottle, the latter is frequently carried when off duty, presumably as a precaution against cholera.

Wireless telegraphy is being established everywhere. On my return journey I was told they have it at Balikpapan (Dutch Borneo) and even at Sambilan or Tarakan island, which lies to the south of British North Borneo. Altogether the authorities are very go-ahead with their schemes for the betterment of the people.

Heavy export duties provide the money for free education and Government pawnshops save the very poor from getting into debt from which the only escape used to be free labour given to the creditor. Another object kept in view is the exclusion of the Indian and Chinaman from this already over-populated island. A thirty rupee landing tax effects this very successfully.

The easiest way of quickly acquiring a knowledge of the surrounding country in Java is to "ask a German," of whom there are about eight hundred in residence there. They outnumber the British by quite four to one.



## CORRESPONDENCE.

### REGIMENTAL POST OFFICE SAVINGS BANK ACCOUNTS.

There are many Regiments, in the Indian Army, in which the advantages which Government concedes in respect to the above accounts, do not appear to be recognized.

The following special conditions govern the opening of these accounts and their transactions:—

The Commanding Officer of a Native Regiment may open a single account with the Post Office Savings Bank on account of the men of his Regiment making his own arrangements about the separate accounts of the individuals, and about the distribution to them of the interest credited upon the conjoint account.

There is no limit to the amount deposited in these accounts.

Withdrawals, without notice, are limited to Rs. 1,000 per mensem, but with one month's written notice any amount may be withdrawn.

Interest at 3 per cent. per annum is allowed for each calendar month on the lowest balance at credit of an account between the close of the fourth day and the end of the month. The advantages of such an account to the men are considerable:—

- (a) They can deposit, monthly, when pay is drawn, any sum from Re. 1 upwards.
- (b) They are saved the very considerable trouble to them of opening an individual account with the Post Office, and the bother of keeping the Pass Book in safe custody.
- (c) They can withdraw, without notice, once a month or whenever they proceed on leave or furlough.
- (d) They can, if thriftily inclined, allow the sums to their credit to accumulate till such time as they finally leave the Regiment.
- (e) They receive interest on every complete sum of Rs. 5 at the rate of  $2\frac{1}{2}$  per cent.

As regards the Regiment, the keeping of the men's individual accounts entails a certain amount of clerical labour which requires the close supervision of Double Company Commanders. But once the account is started there is little or no difficulty, and the popularity of the system lies in the fact that each man's deposit is at "call" and that he is shown the amount to his credit each month and has no further bother about it.

The account was started in the Regiment which is being written off in October 1910, and on the 1st February 1913 the credit balance

in the account is shown at Rs. 17,089-1-3. On opening the account the following rules were promulgated:—

1. From 1st October 1910 a Regimental Post Office Savings Bank account will be opened with a view to encourage men to put by a small sum monthly which at the end of their service would amount to a considerable sum.

2. This fund will be a purely voluntary one.

3. Money can only be deposited once a month when pay is drawn; no sum less than Re. 1 can be deposited, but any larger sum, in multiples of rupees, may be deposited.

4. Withdrawals will be permitted once a month or when men proceed on leave or furlough.

5. Interest at the rate of 2 pies per mensem will be allowed on every complete sum of Rs. 5 and will be credited to each man's account on the 1st April of each year.

Books, on an approved form, in which all deposits, withdrawals and interest are entered, kept up by Double Company Commanders in English. Similar books, in the Vernacular, being kept by Pay Havildars. The Pass Book is kept by the C. O., and all transactions in connection with the Regimental Post Office Savings Bank Account are entered by the Adjutant in "Form G," receipt and expenditure cheques being issued by him. All accounts are checked monthly, and the total credits of each Double Company are added together and compared with the total credit shown in the Pass Book.

The difference between the interest allowed by Government (3 per cent.) and that credited to the men ( $2\frac{1}{2}$  per cent. on complete sums of Rs. 5), pays for the necessary books and forms, any balance being credited to the Regimental Fund.

A. CADELL, LIEUT.-COLONEL,  
38th Dogras.

## REVIEWS.

**On war of to-day.**—By Friedrich von Bernhardi. Translation by Karl von Donat. Two Volumes. (Hugh Rees.).

In the introduction General Von Bernhardi disclaims any intention of competing with Clausewitz as the author of a universal doctrine of war; his task he states is a more limited one, he writes for to-day only, and desires to depict war under present conditions. The basis of his theory, which forms the subject of the first three chapters, is hidden in a cloud of words, but is by no means new—it is simply to study history and to apply its lessons to modern conditions.

The second part of Volume I deals with the "elements of modern war." We must look for changed conditions at the commencement of a struggle between European states. Huge masses will be put in motion on both sides, but as the campaign proceeds the tendency will be for masses to become smaller. Force and numbers are not always synonymous, still great numbers in the end mean victory. The Boers must have known that the British could outnumber them; "it was this tragedy that was deeply felt by the German people at the time the Boers had to submit." Did Prussian feelings suffer similar pangs over the tragedy of Denmark in 1864!

Modern firearms rule the tactics of to-day. Enveloping movements must begin far from the battlefields. The effect of technical appliances, railways, motors, telegraphs, is dealt with. Marches and supply questions are discussed. If armies have changed in form and organization "so also have changed the spiritual means which give life to these forms." "Especially must the influence of command be different from what it was formerly." According to General Bernhardi no one has yet arrived at a conception of what the influence of the superior command should be. Command must "as if by magic" produce maximum performances from the various components of an army; this is impossible "without staking one's full personality." When the armed forces of a nation are engaged in various localities it may be necessary for general head-quarters to remain centrally situated; but if the combined battle of several armies, "like those of St. Privat and Sedan," has to be controlled, the commander-in-chief will not be deprived of the privilege of intervening personally at the decisive point, "and of inspiring the troops by his personality, as the great captains in every age have done. Be the battlefield ever so extended, at one spot of the wide front, the plot laid by the strategic and tactical conditions will thicken to a crisis. That is the point where the director of battle must be also found in the future." "The commander-in-chief's place is to-day, as formerly, where the issue is decided, and where he can himself survey the decisive field of battle." And yet Bernhard

recognizes that the commander-in-chief "must try to keep his mind clear, and memory free from details." He acknowledges that the task he would impose on his commander requires "a great and open mind." Is he not asking too much? Under modern conditions the actual presence of the commander in any part of the forefront of battle cannot exert more than a very limited local influence, while, unless he is more than human, his general control of the operations must suffer. He has other and greater duties to perform. It is recognized that there can be few unalterable rules in war; there may be a time when the presence of the commander-in-chief at the crisis of the battle would be the deciding factor, but a study of modern war will scarcely convince us that this is a just conception of the duties of superior command. Should the German General Staff accept General Bernhardt's views the possible opponents of Germany might have some cause for congratulation.

The reader will find the second Volume most interesting. The author does not agree with Clausewitz that the defensive is the stronger form of war. The rifle favours the defence, the artillery the attack. Boldness is now, more than ever, the essence of war; the defence lacks moral advantages. The defensive is superior as a means of fighting, viewed from the purely local tactical standpoint, but inferior as a mode of action in conducting war.

The all too short chapter on the value and handling of reserves, tactical and strategical, gives food for thought on this most difficult problem of war. In chapter XI "On the freedom of military action" the necessity for study on the part of a military commander is insisted on. He must be capable of planning and acting. Bernhardt here only enlarges on Moltke's great saying "Deliberate and dare"—words which through all time have described the essentials of successful leadership.

General Bernhardt's remarks on naval matters will be read with interest. He praises the action of the Japanese, in surprising the Russian fleet at the beginning of the Russo Japanese War, as "a brilliant example of boldness and strength of resolution."

There are several anti-British allusions, such as are dear to the heart of the modern Teutonic writer, but we can afford to forgive such petty idiosyncrasies as the author has given us a book, based on the deep study of a lifetime, by the perusal of which the military reader cannot fail to benefit.

Though General Bernhardt has studied war, his experiences in 1870-71 have overshadowed his modern studies, and his "War of To-day" is, in some respects, the war of yesterday.

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**The Infantry Scout.**—By Captain F. S. Montague-Bates, East Surrey Regiment (Hugh Rees. *Price* 1s. 6d.)

This useful little book has just been published by Hugh Rees. In it the author, who evidently has a good knowledge of scouting and of training scouts, has put together a number of notes from the

various text-books, and others of his own, collected while training scouts, with the result that the book may be called a text-book for scouts. It is published under official sanction and should result in infantry scouts being trained on uniform lines in accordance with the existing training manuals and text-books. It is not only useful to British infantry but also to volunteers and by translation to Indian infantry also. The author is very definite in laying down that the battalion, or 1st class, scouts should be used for gaining information and never as skirmishers, or ground scouts, while the company, or 2nd class, scouts may be used thus. He advocates a scout officer being supernumerary to the establishment of a battalion, and that he and the scout N-C. O. should be struck off all other duties and hold their appointments for two years, while each should have an under-study. He also suggests that scout's badges should be distributed sparingly and only as the men attain to a certain standard. Chapter IX, the first of Part 2, is perhaps the most important, as it gives an excellent syllabus of training for six months. In mentioning the various books, which should be in the possession of the scout officer, we notice Training and Manœuvre Regulations and its Indian Supplement are omitted. There are useful chapters on the various headings of the syllabus and in Part 3 the author gives some useful suggestions. The chief ones among these are - extra pay for scouts, provision of bicycles, watches and field-glasses, scout dogs, and schools of scouting.

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**The transformations of war.** By Commandant J. Colin, translated by Major L. H. R. Pope-Hennessy, D.S.O., Hugh Rees.

In the volume under review the author places before us a general treatise on the art of war, with an historical review of the causes which have led to the successive modifications of that art since the time of the Roman cohorts. For this purpose, he divides the work into three parts: "The Combat," "The Battle" and "Operations;" headings which correspond generally with minor tactics, grand tactics and strategy as commonly used by our authors.

In Part I we are given a good representation of the evolution of minor tactics and the ideas as to the modern infantry fight and the co-operation of artillery therewith are generally in accord with those accepted in our Army. After dealing somewhat exhaustively with the subject of infantry formations, especially as regards the old controversy of "Line and Column," the author lightly sums up that, while studying methods and formations, one must remember that success lies in courage and the will to conquer.

Part II, "The Battle," is short and not very convincing. The author is greatly in favour of an extended line of battle and converging attack in preference to the method of manœuvring with a general reserve. He dwells at some length on the difference between converging movements, which aim at envelopment, and a



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so many writers of recent  
have been written with  
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essentially Napoleonic, as  
pact, which he alleges  
is a somewhat rigid  
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confusing in English.  
also tends somewhat to  
worth reading and  
from past events and  
while the reader may  
some of the arguments  
the conclusions

## NOTICES OF BOOKS.

**Dont's for Non-Signallers**, by Boanerges Blitzen. Pioneer Press. Price 6 annas.

A few hints based on actual experience for the consideration of Company and Double Company Commanders for the protection of Signallers from unnecessary difficulties.

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The book professes to give simple methods for finding any true bearing or direction by day and night without the use of any instrument.

**Staff Duties and other Subjects**, by Br.-Genl. G. G. Aston. Hugh Rees. Price 3s. 6d.

As stated in the preface this book is intended for Officers of Dominion Forces rather than for those of the Regular Army. It is none the less instructive to all. It deals in clear and simple language with the organisation of Dominion Forces and the difficulties to be met with special reference to conditions of South Africa. It consists of a series of lectures delivered at Blomfontein to the first 50 Staff Officers selected to administer and train the Citizen Forces of the Union in 1912.

mere extension of front which has for its object the outflanking of the hostile front. In this connection, his remarks on the battle tactics of 1866 and 1870 are interesting, as he maintains that Von Moltke adopted the latter and safer rather than the former and more enterprising method.

Part III follows much the same lines as Part II in emphasizing the advantages of converging movements. The author endeavours to show that, contrary to generally accepted ideas, this form was Napoleon's favourite manœuvre. He bases his conviction on this point mostly on the campaigns of Ulm, Jena, Eylau and the battles of Castiglione, Bautzen and Lutzen. Whether, however, the detachment of Davoust before Jena and of Ney and Davoust before Eylau were made with the deliberate intention of a converging attack is certainly open to doubt.

While studiously advocating a strong offensive as the only means of eventual success, the writer does not hesitate to condemn a weak and premature offensive, undertaken without due consideration as in the case of the French Army in 1870. He is particularly sarcastic on the subject of manœuvring with a large strategical advanced guard which he terms a method "of allowing divisions to be caught and beaten by the enemy on the pretence of entangling and fixing him."

The chapter on War and Policy is good, but it is strange that no mention is made of the economic aspect of modern war, a subject which has engaged the attention of so many writers of recent years.

Taken as a whole, the book appears to have been written with the definite purpose of portraying the advantages of a strong offensive and of converging methods in carrying it out. The author writes with conviction, and we may excuse the special pleading he indulges in, with a view apparently of persuading his fellow-countrymen that the methods he advocates are essentially Napoleonic, as opposed to the over-concentration prior to battle, which he alleges to be a characteristic of Prussian methods.

The volume possibly loses in translation, as a somewhat rigid adherence to French idiom makes the argument rather hard to follow in places. The literal translation of the present tense as used by French authors in describing past events is confusing in English. The great number of quotations indulged in also tends somewhat to obscure the argument. The book is, however, well worth reading and interesting both in regard to the lessons drawn from past events and in the forecast of future methods of war; and while the reader may perhaps be a little sceptical as to the force of some of the arguments put forward, he will find it difficult to quarrel with the conclusions arrived at.

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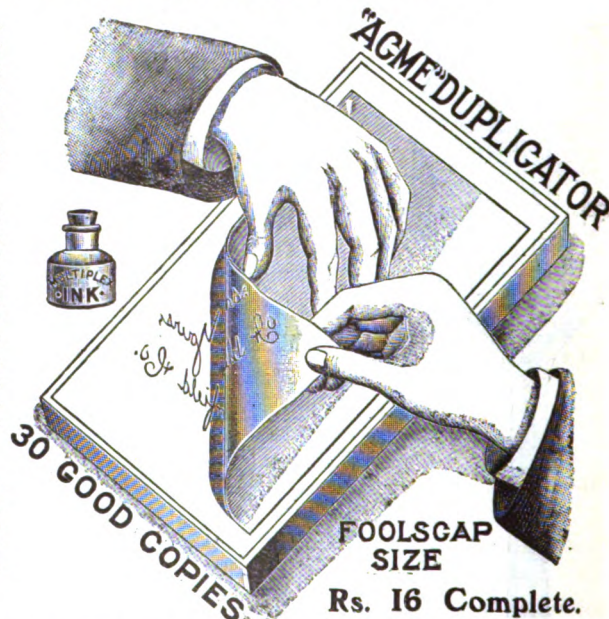
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2. No remarks of a personal nature, or in any way subversive of discipline, will be permitted.

3. Anonymous contributions under a *nom-de-plume* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer, and the paper will, if accepted, be published under that name, unless a wish is expressed for it to be published either under his initials only or anonymously. The Executive Committee will decide whether the wish can be complied with.

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5. The Council do not undertake to authorise the publication of such papers as are passed in the order in which they may have been received.

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8. Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.



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Vol. XLII.

October 1913

193

# **JOURNAL**

OF THE

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3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.

4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V.-P. for the postage, or bearing by railway.

5. The Institution publishes a Quarterly Journal in the months of January, April, July, and October, which is issued, postage free, to members in India, and to all life-members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.


6. Members and the public are invited to contribute articles to the Journal of the Institution, for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the inside back cover of this Journal.

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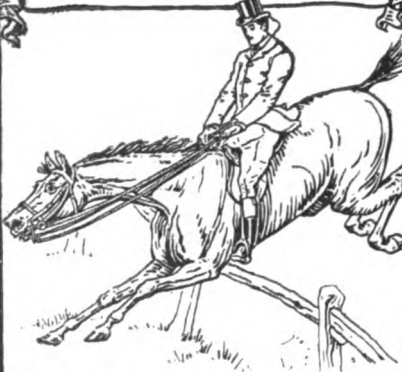


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OCTOBER 1913.

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"but life members who have left India shall not be liable for foreign postage on Journals."

If those life members, who have already paid for some years in advance, wish to have such amounts refunded, they are requested to apply to the Secretary.

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- (f) Two sets of six questions on the Crimean War.
- (g) One set of six questions on the Indian Mutiny will shortly be ready.

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(ii) A Pamphlet dealing with the Shenandoah Valley Campaign from April 1861 to June 1862, the subject set for the Promotion Examination to be held in October 1913, and March 1914, can be obtained from the Secretary. Price one rupee.

### V.—INDEX TO VOLUME XLII.

The usual annual index of articles published in the Quarterly Journal during the year is included in this number.

### VI.—ROLL OF MEMBERS.

Copies of the Roll of Members, corrected to 1st June 1913, are available. Price Rs. 2 per copy, per V.-P. Post.

### VII.—LECTURES.

The following is the programme of lectures which were arranged by the Institution during 1913 and delivered at the Theatre, by kind permission of the A.-D.-C., Simla:—

(i) 30th July, 3 P.M.—By Brig.-General W. P. Braithwaite, C.B., Commandant, Staff College, Quetta.

*Subject:—"For the conduct of an Army, character weighs more than knowledge or science."*

Lieut. General Sir P. H. N. Lake, K.C.M.G., C.B., in the Chair.

(ii) 13th August, 3 P.M.—By Lieut.-Colonel W. E. Venour, 58th Vaughan's Rifles (F. F.)

*Subject:—"Training for Frontier Warfare."*

Major-General W. E. Bunbury, C.B., in the Chair.

(iii) 27th August, 3 P.M.—By Lieutenant G. Burrard, R.F.A.

*Subject:—"The Tibetan Frontier."*

The Hon'ble Lieut.-Colonel Sir A. H. McMahon, G.C.V.O., K.C.I.E., C.S.I., in the Chair.

(iv) 10th September, 3 P.M.—By Colonel R. H. Firth, V.H.S., A.M.S.

*Subject:—"Fifty Years of Sanitary Effort in the Army in India."*

Surgeon-General A. T. Sloggett, C.B., C.M.G., K.H.S., in the Chair.

(v) 18th September, 3 P.M.—By Captain F. C. Waterfield, 45th Rattray's Sikhs.

*Subject:—"Travels on the North-Eastern Frontier."*

The Hon'ble Major-General W. R. Birdwood, C.B., C.S.I., C.I.E., D.S.O., in the Chair.

(vi) 24th September, 3 P.M.--By Captain M. Crofton, R.H.A.

Subject :--"*An Introduction to the Study of the War in the Balkan Peninsula, 1912.*"

Major-General F. J. Aylmer, V.C., C.B., in the Chair.

2. It has been decided in future that admission to all lectures arranged by the Institution in Simla will be by ticket. Members requiring tickets for themselves and their friends will kindly apply to the Secretary for them.

## VIII.—PREMIA FOR ARTICLES IN THE JOURNAL.

As it does not seem to be generally known that articles are paid for, as far as the resources of the Institution will allow, members are informed that a sum not exceeding Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

## IX.—LIBRARY CATALOGUE.

The library catalogue revised up to 1st November 1912 is now ready. Members requiring a copy should kindly inform the Secretary. Lists of books since received are published quarterly with the Journal.

Price of catalogue Re. 1, or Re. 1-4-0 by V.-P. P.

## X.—LIBRARY.

Several instances have occurred lately of members who have asked for books from the library, having refused to accept them on delivery by V.-P. P. Members are therefore informed that when books asked for are out at the time of receipt of the request, they are recalled under Library Rule No. 7 a fortnight after issue and sent to them.

If no instructions are received that they will not be wanted, unless received within a certain time, members will be held liable for the postage, whether they refuse them on delivery or not.

## XI.—BOOKS AND MAPS PRESENTED TO LIBRARY.

The thanks of the Council are due to the Director of Ordnance Inspection for the following :—

- (i) Map of the China Coast and Rough Sketch of the Provinces lying between Canton and Peking—November 1859.
- (ii) Minutes of the Proceedings of the Royal Artillery Institution, Vol. I (1858) to Vol. XXI (1894); (Vols. 10 and 18 missing).

## XII.—GOLD MEDAL PRIZE ESSAY, 1912-1913.

The Council have awarded the Gold Medal for 1912-1913 to the essay sent in by Major A. G. Thomson, 58th Vaughan's Rifles (F.F.).

Essays were also received from—

Major D. Deane, 12th Cavalry.

Captain A. H. W. Elias, 1st K.G.O.) Gurkha Rifles.

Major B. P. Ellwood, 31st (D.C.O.) Lancers.

Major R. E. Greer, R.E.

Major T. E. Madden, 17th Infantry (The Loyal Regiment).

## XIII.—MACGREGOR MEMORIAL MEDALS, 1913.

On the recommendation of H. E. the Commander-in-Chief, the Council have awarded the medals as follows :—

*Silver medal for officers*—Captain B. N. Abbay, 27th Light Cavalry.

*Silver medal for soldiers*.--Sowar Sirdar Khan, 39th (K.G.O.) Central India Horse, and Havildar Waratong, Burma Military Police (specially awarded a silver medal.)

**III.—TACTICS**

To assist officers  
members only, or  
Rupees 5 per  
officer selected  
Three sets  
A number  
be sent under  
Simla.

**IV.—MILITARY**

(i) In  
study of  
of questions

SECRETARY'S NOTE

**IV.—GOLD MEDAL PRIZE ESSAY, 1913-1914.**

The subject selected for the Gold Medal Prize Essay, 1913-1914, will be  
submitted to the reader with this issue of the Journal.

**IV.—NORTHERN AND SOUTHERN ARMY PRIZE ESSAYS**

The Council will award the sum of Rs. 50 each on the usual conditions  
for the best essay sent in from members of the Northern and Southern Armies  
by the 31st December 1913 on subjects selected by their respective Commanders.

**XVI.—ANNUAL GENERAL MEETING OF MEMBERS**

The Council have decided to amend the Rules of the Institution to provide  
for an annual General Meeting of members; the amendments to the rules will  
be published in the Journal for January 1914.

**XVII.—REGULATIONS OF THE U.S.I. OF I.**

As several amendments have lately been made to the Rules and Bye-laws  
of the Institution, they will be reprinted and copies circulated with the Journal  
for January 1914.

**XVIII.—QUARTERLY SUMMARY.**

A new feature has been introduced in the October Journal, namely a summary  
of news of military interest. It is intended chiefly for those out of India  
or otherwise out of touch with the Army. It is at present only a beginning,  
but it is hoped that it will in the course of time form a valuable addition to the Journal  
when the idea has assumed a definite form.

# THE JOURNAL

OF THE

## United Service Institution of India.

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Vol. XLII.

October 1913.

No. 193.

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### IMPERIAL UNITY AND CO-OPERATION FOR DEFENCE.

BY CAPTAIN C. H. G. BLACK, 34TH POONA HORSE.

#### **The Peculiar Conditions of the British Empire and the Supreme Importance of Naval Control of the High Seas.**

There is no precise precedent or parallel for such a political system as that which now constitutes what we call the British Empire. For sure guidance, therefore, in principles of government we cannot look to history, either ancient or contemporary. The Romans undoubtedly succeeded in uniting various subject kingdoms, provinces, and races under the domination of a central paramount power, but their dominions were bound together by solid communications. Russia has built up an Asiatic Empire on a preconceived and definite plan of land conquest; and the modern Empire of Germany is a compact federation of contingent states. Greece might have afforded us an example of successful Colonial dominion but failed, through neglect, to keep either the affection or the allegiance of her Colonies; Holland and Portugal, by their inability to defend their home territories, were obliged to surrender their possessions overseas; and Spain affords a potent warning of the disaster to any kind of Colonial system which inevitably follows incapacity to safeguard maritime communications.

Unlike other Empires which have enjoyed a successful growth, the expansion of Great Britain has been by sea alone. The immense fabric of her Empire is alone supported by sea-borne commerce, and the movement of trade is as vital to her life as is the circulation of blood to the human system. It follows, therefore, that the security of maritime communications become the first essential condition of national existence.



**XIV.—GOLD MEDAL PRIZE ESSAY, 1913-1914.**

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**XV.—NORTHERN AND SOUTHERN ARMY PRIZE ESSAYS.**

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Until recently, Great Britain has possessed naval superiority in every sea, and so has been able directly to safeguard every ocean highway. But this unique position is passing from her. The change is due not to neglect or indifference on her part, but to the determination of foreign Powers to acquire navies, which, to quote from the preamble to the German Navy Bill of 1900, will be "of such strength that war even against the mightiest Naval Power would involve risks threatening the supremacy of that Power." The direct challenge of the German Navy alone, which by next year will consist of a highly concentrated battle fleet of seventeen Dreadnoughts with a full complement of cruisers and torpedo craft, operating from a base within four hundred miles of our shores, has obliged us to concentrate the greater part of our naval strength in home waters. The gravity of the situation is aggravated by the comparative weakness of our land defence, which compels us to obviate every possible risk of German preponderance in the North Sea, even for a number of hours. In consequence, we can no longer directly cover our maritime traffic and protect the seaboard of our Dominions overseas from attack everywhere and by all possible enemies.

A new situation, therefore, has arisen which involves the interdependence of fleets and armies, and which demands that the problem of Imperial Defence be regarded in a new light and its solution based upon new principles.

From a strategical point of view it is axiomatic to say that the Empire cannot be defended by each portion of it providing for a local and passive defence of itself, but only by ensuring that the Navy of the Empire is sufficiently strong to take the offensive against the enemy's fleets, and that it is backed by adequate military force. This postulates the maintenance of an Imperial fleet superior in strength at the decisive point to any possible combination of hostile fleets. The United Kingdom is still able, though at increasing sacrifice, alone to maintain such a paramount fleet. But the burden is growing heavier day by day. The wealth and population of Germany, Austria, America and of other lesser nations is increasing either absolutely or relatively faster than that of the United Kingdom. These nations are able, therefore, absolutely or relatively, to increase the strength of their armaments and most of them are doing so. At this moment there are only 28 British Dreadnoughts built or building as against 62 for foreign Powers. Though a situation which presupposes a combination against us of every foreign Power is unimaginable, yet these facts go to prove that the time is not far distant when the United Kingdom will be unable to support the burden of the armaments required for the defence of the Empire unless a share is taken by the daughter nations. These daughter nations are now at the parting of the ways; they are faced with two, and only two alternatives, either whole-hearted co-operation

**The necessity for the concentration of naval strength at the decisive point.**

in Imperial Defence involving perhaps some measure of political federation, or the dismemberment and disintegration of the Empire.

Let us now briefly review their attitude, both past and present, towards this all-important question of Imperial Defence and try to determine what the signs may augur for the future.

#### THE ATTITUDE, BOTH PAST AND PRESENT, OF THE GOVERNING DOMINIONS TOWARDS THE SELF-QUESTION OF IMPERIAL DEFENCE.

It is only within the last thirty years that the existence of an Imperial spirit throughout the Dominions of the British Crown has begun to make itself manifest. Like all national movements it required to be quickened into life by the fear of foreign aggression due to the re-awakened ambitions of European nations.

The Colonial Conference of 1887 affords the first indication of a vague desire to secure strength by unity, but the general tendency of Colonial ideas seems to have been more towards commercial reciprocity than towards any system of co-operation for defence. It was felt that the latter might involve the Colonies in a foreign policy which would be outside their control. At the same time Australia agreed to pay £126,000 a year towards the maintenance of an auxiliary squadron in Australian waters, while Canada was to spend £200,000 on her land defences. Cape Colony declared herself unable to contribute owing to the financial embarrassment caused by her native wars.

Ten years elapsed before the next Conference was convened, and during the interval the activities of Russia in Eastern Asia, of France in Northern Africa and of Germany in South-East and West Africa had caused Great Britain much anxious consideration regarding her responsibilities towards her dependencies. It was disappointing, therefore, to find that the Colonial Premiers 'were not anxious to share in the control or burden of the Empire' or 'prepared to accept a share in the direction of Imperial policy which would involve a proportionate contribution in aid of Imperial expenditure. The Motherland was left to face alone the whole responsibility of the naval defence of the Empire, though the Colonies agreed to provide for their own local land defence.

The next five years witnessed the growth of a national spirit within the Dominions themselves and the Colonial Conference of 1902, while disclaiming all idea of feudatory dependence on the Motherland, met with the desire of affording her voluntary assistance on terms of equality. Most of them, at any rate, responded fairly generously to Mr. Chamberlain's appeal for some further contribution towards the expense of naval armaments. Canada alone stood aloof. The strength of her national aspirations, coupled with inexperience in international affairs, may have

dimmed her perspective and led her to the contemplation of a condition of independent sovereignty. At any rate, she declared that she intended establishing a local naval force in Canadian waters and was therefore unable to make any offers "analogous to the rest."

The suggestion of ear-marking Colonial troops for Imperial services again met with general disapproval, and the dominant idea in the Colonial mind still seemed to be that the consolidation of the Empire would be furthered rather by a system of commercial reciprocity than by one of co-operation for defence.

The succeeding five years witnessed a peculiar experiment on the part of the British Government in the conduct of foreign affairs. A new situation had arisen in Europe as the consequence of the Russo-Japanese war, which, while it laid 'the Russian bogey' and lessened our anxieties regarding India, contributed to the creation of a far more serious danger in the North Sea. The new German menace led to the composition of our differences with France as well as to an entirely new grouping of the Powers in the European arena. The Liberal Government, which had just taken office in the United Kingdom, dismayed at the prospect of maintaining the huge armaments which the European situation demanded, attempted to preach to Europe a new doctrine of peace and disarmament and "to give earnest proofs of their sincerity," made considerable reductions in naval and military expenditure. As it was just at that time that the 1907 Conference met, it was not thought politic to make any mention of improved naval measures for Imperial Defence.

As regards military measures, however, a very important principle received general approval and that was the scheme for the creation of an Imperial General Staff with a view to the formation of a body capable of giving the highest expert advice to the local Governments on military matters. It was to be hoped also that this scheme would lead to the production of uniformity in the leading, training, organisation and equipment of the military forces throughout the Empire and thus facilitate the problem of mutual support in time of necessity.

It was decided also that the Conference should meet every four years and that its constitution and status should be regularised and made permanent.

The events of the next few years however startled the Imperial Government out of its state of happy complacency. The Balkan crisis came like a bomb-shell; solemn treaty obligations were repudiated and wholesale annexation of territory justified only by the argument of accomplished fact. Germany took her stand by Austria "in shining armour," and, by the acceleration of her ship-building operations, caused a panic in the United Kingdom which extended to the furthestmost parts of the Empire. Australia, who had already an anxious eye fixed on Japanese development, came

**The Colonial Conference of 1907.**

**The Special Conference of 1909.**

forward with a spontaneous offer of a Dreadnought for the British Navy, but finally agreed to initiate a comprehensive scheme for a local navy instead. New Zealand followed with the offer of a Dreadnought, and Canada also began to talk about the organisation of a Canadian Naval Service "to act in close relation to the Imperial Navy." To discuss these questions it was decided to convoke a special Conference in 1909. Australia and Canada, acting under the recommendations of the Admiralty, agreed to form distinct fleet units, but disappointed the Admiralty's hopes in that they would give no guarantee as to unity of command, Canada even reserving for herself the option of taking part in an Imperial war at all. At this Conference, however, the question of foreign policy was not discussed at all, and foreign policy and measures for Imperial Defence are matters which must necessarily hang together. If independent navies were to be formed, obviously their movements outside their own waters would have to be controlled by supreme Imperial authority or they would become a danger rather than a support to the Empire.

The question of a foreign policy for the Empire and the extent to which the Dominions should have a voice in it formed the main theme for discussion at the regular Conference that met under the Resolution of 1907. This Conference assembled on the 23rd May 1911 and the chief result of its deliberations was the acceptance of the principle that there should be "only one" foreign policy for the Empire. It was however unable to arrive at any satisfactory device for keeping the Dominion Governments in close touch with the Home Government. At the same time it was agreed that, while the Dominions should retain absolute control over their navies, these navies would not be used to defeat the policy of the Foreign Office and that they would be governed by Foreign Office instructions whenever they entered foreign ports. Moreover, the training and discipline of their navies would conform to that of the Imperial Navy, of which, with the consent of their Governments, they would form an integral part in time of war.

It would seem then that the overseas Dominions have, at length, awakened to a distinct sense of their Imperial responsibilities and that they have now begun to realise that they have vital interests in common with the Motherland and with one another. There is a growing spirit of unity throughout the Empire which is the result of a dawning conviction that the Anglo-Saxon races have a common purpose and common ideals, and that set up against them are races whose purposes and ideals are dissimilar, if not directly antagonistic. At any rate, we find that this dawning conviction has so far taken practical effect in the acceptance by the overseas Dominions of a great principle, namely, their obligation to secure their own territories and, at the same time, to make their preparations on such lines as will enable them to come to the assistance of the Empire with whatever resources they can command. Between

**The Imperial Conference of 1911 and the present trend of Colonial feeling.**

acceptance in principle and execution in fact there is nevertheless a wide step which involves the making of many sacrifices. But in the meantime let us consider what the resources of the Empire are, how they are being developed and what are the existing means for this co-operation.

#### AN ANALYSIS OF THE RESOURCES OF THE EMPIRE.

Always assuming the maintenance of supremacy at sea, our home army has been organised on a two line basis, the first line being available

##### **The United Kingdom.**

for the general service of the Empire, while the second line is for purposes of home defence only.

The first line, which includes Regulars, Regular Reserves and Special Reserve, contains all told 350,000 men of all ranks and enables us to despatch and maintain in the field an Expeditionary Force of 160,000 men organised in six Divisions and one Cavalry Division. Under present conditions, it is hoped and believed that such a contingent will, in combination with naval support, be sufficient to safeguard our Imperial interests abroad, and to maintain the balance of power in Europe.

The organisation of the second line which consists of a Territorial Force of nominally 300,000 but actually only 245,000 men is based upon two assumptions, *viz.* :—

- (1) That our supremacy in the home seas can be maintained.
- (2) That the Navy is in a position to fulfil its undertaking to destroy any hostile expedition of over 70,000 men.

As these assumptions have been accepted by the Defence Committee sitting, presumably, with a full sense of its responsibilities, they need not be called into question here. Whether, however, a local defence force of 245,000 men, trained and equipped as it is at present, can, after allowing for the needs of obligatory garrisons and detachments, be confidently considered competent to defeat an invading army of 70,000 continental soldiers, must remain for the present an open question. There seems to be some doubt as to what a hostile expedition really means, whether a raid or whether an organised invasion, and interesting definitions of the terms have recently been given by responsible speakers in Parliament. But the whole matter has apparently been referred to the Defence Committee and in due time we may expect some definite pronouncement on the subject. It may be noticed, however, that critics of our military system often lose sight of the principle that the force used defensively should be reduced as low as possible in order to increase as much as possible that employed offensively, and that minor ills must be risked in order to secure great results. When however we view the steadily increasing wealth and power of Germany both on sea and land, the practically stationary condition of the French population and military strength, and the weakening of the Lowland States, we have to regard the future with anxiety. Nothing can allay this anxiety but the provision of a real defence force strong

enough to meet all possible contingencies. For the formation of such a force, the voluntary principle has been given the fair trial that was asked for it and seems clearly to have failed. The problem now is to induce the nation to accept the sacrifice entailed in a system of compulsory training. The sacrifice is really a small one compared with what foreign Governments are obliged to ask of their subjects. Owing to the advantages of our insular position, nothing like the two or three years' universal or practically universal service that Continental nations have to undergo would be necessary for us; something more like the Australian system of military training would be all that is necessary. Surely that is not too much to ask of the citizens of our country, seeing what a heritage is theirs, and what it would mean to lose it. From an educational and disciplinary point of view also the value of a general system of military training would be incalculable, and indeed almost sufficient recommendation in itself.

In India there is a British garrison of 75,000 men and an Indian army of 162,000 both liable to service overseas, besides 34,000 European and Eurasian volunteers and 20,000 Imperial Service troops. Other armed bodies are the frontier militias, armed police and the armies of feudatory states.

The functions of these forces have been defined by the General Staff as follows:—

- (1) To defend Imperial interests wherever affected;
- (2) To preserve order on the frontiers of India (which includes Afghanistan); and
- (3) To suppress serious internal disorder.

In the case of invasion, however, by a powerful enemy, they are only intended to meet the first attack and gain time for successive reinforcements to arrive from the rest of the Empire. The existing organisation and strength of the army in India has recently been under the consideration of H. M.'s Government and has been found adequate to meet India's personal requirements and to put her in the position of being able to render effective support to other portions of the Empire. The forces are so organised that nine Divisions and eight Cavalry Brigades may be available at any time for service beyond the limits of the dependency.

In the Mediterranean garrisons, Egypt, the Straits Settlements, Ceylon, China, Aden, West Africa, Mauritius, Jamaica and Bermuda, there are maintained 26,300 regular troops and 9,600 men of the Indian Army and Colonial Corps exclusive of locally raised forces.

These garrisons, however, have been formed on the principle of employing the least possible number of men for local defence with a view to sparing as many men as possible for larger operations; and so, in time of war, support from them cannot be counted on.



Of all the Dominions, the Commonwealth is first in the field with regard to naval measures for defence. She has already embarked on an ambitious scheme of naval construction prepared by Admiral Henderson, which will provide in twenty-two years a fleet of 52 vessels at the cost of £88,000,000 of which money half will be expended on docks, etc. It is proposed to create an Australian naval fleet unit of eight battle cruisers, ten protected cruisers, eighteen destroyers and twelve submarines with depôt and repair ships. It may be noticed that in certain eventualities, the value of the eight battle cruisers as a mobile reinforcement to the Imperial Fleet would be considerable.

The present field forces of the Commonwealth consist only of five light horse brigades, two infantry brigades, and four mixed brigades, which, with the garrison troops, it is hoped will be sufficient for the defence of the Colony until the new Citizen Force is in a position to assume its responsibilities. This Citizen Force will not reach its full strength until the spring of 1919, when the troops now joining will have completed their period of training. It is organised into two main branches, *i.e.*, Field Troops and Garrison Troops, the former being organised to admit of concentration in one body to resist an invader, and the latter for the purpose of garrisoning defended ports and important centres. The scheme, as now working, gives an annual contingent of over 22,000 senior cadets, and, from calculations based on the most recent returns, it seems likely that in seven years' time the available forces will number over 150,000 trained men.

In addition there are a few unallotted troops, consisting of the Permanent Instructional Staff, some permanent artillery and a few small units of signallers and University Corps, numbering in peace 1,800 and in war 2,200 of all ranks.

Although it is not proposed at present to create any higher organisation than that of brigades, yet a divisional organisation is being considered and the establishment of the auxiliary service has been fixed with that end in view.

Thus it seems, that by 1919 a national force will be provided on which the Commonwealth can depend for the services which are likely to be demanded of it. In organisations it will fit in well enough with the brigades and divisions of the Imperial establishment and will be capable of expansion at any time by an increase of the annual quotas. Its territorial basis, moreover, is the only sound one for a national army.

It cannot be denied however that the Citizen Army is intended mainly for home defence and that, as yet, the Commonwealth has given little attention to the problem of rendering assistance across the seas. Employment outside Australia is dependent on the goodwill and assent of the men themselves, and though it cannot be doubted that in time of need the will will not be wanting, yet it is difficult, if not impossible, to build up any satisfactory scheme for co-operation upon hypothetical premises.

For the Commonwealth to maintain as a parallel organisation a kind of regular expeditionary force would be uneconomical and outside the sphere of practical politics. It would seem, therefore, that the best course she could pursue would be to make the liability to serve across the seas obligatory and to transport in its ordinary formations whatever portion of her Citizen Forces she was prepared to send abroad for Imperial purposes. It is thought that in certain cases as much as three divisions and proportionate number of mounted troops, that is, about half the total strength of the Citizen Force, could be spared. The question of transport to accompany an expeditionary force has not yet been sufficiently considered. In Australia itself the Citizen Army is dependent on local resources which are ample.

It will be seen then, that the Commonwealth is making determined and successful efforts to meet her obligations. In addition to the great outlay involved in the building of a navy and to an annual expenditure of £1 per head of population on her Citizen Army, she is engaged on the improvement of her present railway communications, including the construction of a trans-continental railway.

New Zealand has followed Australia's lead and has now a territorial force of 30,000 men consisting of four brigades of infantry, four brigades of mounted rifles and four brigades of field artillery raised on a system of compulsory training. Like Australia also she has a General Staff and has adopted our training manuals and pattern of armaments. The organisation of the brigades is, with the exception of certain immaterial points, similar to the home one, and there are a number of administrative units in existence which would accompany any expeditionary force sent from the Colony.

The New Zealand authorities consider that for such a force in all probability one brigade of each of the three arms could be spared. The dispersion of New Zealand's population, however, makes the problem of forming an overseas force much more difficult for her than it is for Australia where the bulk of the population is concentrated in the big cities. The principle of universal obligation to Imperial service, moreover, requires recognition by legislative enactment.

The action of the New Zealand Government in placing a Dreadnought cruiser unreservedly at the disposal of the Board of Admiralty shows an enlightenment in the matter of Imperial Defence that might well be imitated by the other Dominions.

Little assistance for Imperial purposes can yet be expected from the South African Union. This is only natural on account of the acuteness of her native problem, the proportion of her white population to her coloured being as 1 to 4.

The New Union Defence Act provides a small permanent force of 25,000 men including an artillery section, and an active Citizen

Force of 20,000 to 25,000 men between the ages of 17 and 25, who undergo a course of four years' training. The complement is made up by voluntary enlistment, supplemented, if necessary, by a ballot. All citizens who do not serve in the active Citizen Force would be required to belong to rifle associations which will make their own rules and elect their own officers.

The active Citizen Force, with its small mobile contingent, forms the first line of defence, the second line being composed of men not over 45 years of age who have not been through the active Citizen Force, but are members of rifle associations, and of ex-members of the permanent and coast garrison forces. The last named force is a separate volunteer organisation consisting of an artillery corps and units trained to engineering, signalling and telegraphy.

A third line of defence or national reserve comprises all citizens between the ages of 17 and 60, who are not included in the other two lines.

The Union is divided into military districts, each under a Staff Officer of the permanent Staff.

The Bill does not go very far but, at any rate, it makes a beginning, and assumes a responsibility for home defence which hitherto has been shared to a large extent by the Imperial Government, as it is quite possible that the Union may need Imperial help, her intention of organising and training her forces on the British model is to be commended.

Her expenditure on these measures is 13s. 6d. per head of her white population, but as she is situated on one of the great trade routes to the east, as she has a coast line of nearly 1,600 miles, and as practically all her trade is sea-borne, the supremacy of the British Navy is essential to her welfare. She might therefore reasonably be expected to make a larger contribution to the Imperial Navy than she seems inclined to do at present.

Unlike the other Colonies Canada depends solely on voluntary service for defence. She has a permanent force of all arms, about 3,000 strong, and an active militia of about 47,000, supposed to be capable of expansion in war to 105,000 men. The militia has recently been organised on a divisional basis which provides six divisions and four cavalry brigades (really mounted rifles). These are staffed on the home model, and training is now proceeding on the lines laid down in our regulations, but the time allotted for it is still quite inadequate.

The great fault that General French found with the Canadian forces was the absence of arrangements for rapid mobilisation, which for Canada is a matter of vital importance; but lately there have been two Imperial Officers constantly employed at head-quarters on this branch of the Staff, and it is believed that a great improvement has been effected. The next annual report, however, must be awaited before we know that the Canadian forces are yet fit for the work that they may be called on to perform.

The only help from Canada that the Imperial Services may look for would take the nature of contingents of all arms requiring some five or six weeks to collect. It is thought that the troops that could be spared for an overseas expedition would in all probability be sufficient to make up two divisions and one or two cavalry brigades, but as yet only the men of the permanent force are liable for service beyond the limits of the Dominion.

Before Canada can be said to be contributing a fair share to the military needs of the Empire, she would require to adopt the following measures:—

- (1) Compulsory training for the national army with Imperial liability to fight across the seas.
- (2) Adequate transport and auxiliary services.
- (3) A larger staff of trained officers.
- (4) More artillery.

Canada's present annual expenditure on defence is only 4s. 9d. per head of her population, but she is now showing a strong disposition to contribute materially to the strength of the Imperial Navy. In the Dominion itself, however, there is considerable opposition to the naval policy of the present Conservative Government, which, very properly, seems to be along the lines of united action and central Imperial control.

Canada, moreover, is furthering the cause of Imperial Defence by other indirect means, such as the granting of subsidies to steamship lines working between the Dominion and the rest of the Empire, contributions to the Pacific and other cables, and the initiation of a system of trade preferences within the Empire.

It will be seen, then, that although the burden of Imperial

#### **Conclusion.**

Defence does not fall with equal incidence upon all parts of the Empire, and that separative tendencies still militate against any attempt to formulate strategic plans based on common action, yet the recommendations of the last Colonial Conferences are being worked up to, and distinct efforts are being made towards the attainment of a common deal of organisation, training, and discipline. This will leave the Empire in a military sense ready for an eventual political awakening to the necessity of combining its whole resources, whether on land or sea, under central control in order to meet a great and common danger.

#### **PROSPECTS OF IMPERIAL FEDERATION.**

In nations that have sprung from a common stock there is a common instinct for self-development and expansion which tends to weld them together. This instinct only dies out as the nations become effete. "When the Roman Eagles retreated across the Danube," an eminent Colonial has written, "not the loss of Dacia but the satisfaction of the Roman people at the loss was the omen of the Empire's fall." A desire for union has often been expressed by great British statesmen in the past, but the idea was always abandoned because of the then conditions of the world which made

impossible any practical scheme for Imperial unity. We now live in a new era, and almost in a new world. The physical impossibilities of the past no longer confront us; modern science has conquered them, though of course it has not and cannot remove them altogether. Other obstacles that lie in the way are moral factors such as the materialism of the present age, provincial prejudice and selfish rivalries. But none of these are insurmountable and the visions of past achievement and present prosperity grow dim beside the prospect of a united Anglo-Saxon Empire, which would be the highest political organisation the world has ever known.

No one, however, would wish to see federation forced on before its time. The idea must grow in the minds of the people and ripen in due season.

But there are stepping stones to its ultimate consummation which may be laid down in the meantime, and the sooner the work is begun the better.

As long as a separatist naval and military policy obtains, and the conduct of foreign relations remains the exclusive affair of the Cabinet at Westminster, so long will it be impossible to

**An Imperial Federal Council.**

bring about an effective system of co-operation for Imperial Defence. Though doubtless the Dominions have interests which are practically coincident with those of the Mother country and are, indeed inextricably bound up in her fate, nevertheless it is not reasonable to expect them to contribute in men, ships, and money to Imperial services in the control of which they would have no share. The fairest and simplest solution of the difficulty would seem to lie in the transformation of the existing advisory Committee of Imperial Defence into a representative and Executive Federal Council of Defence. Though, under its present constitution, the Committee of Imperial Defence has a wide range for its activities, yet its powers are very limited. It is suggested however that it should form the nucleus of an Imperial Federal Council, which would be constituted on a representative and executive basis. The idea is not a new one. It has been put forward recently by many writers on the subject of Imperial Federation, who suggest various schemes for proportional representation on a basis of wealth, or of population, or of both. The flaw in all arguments for representation on these bases is, of course, the fact that existence is as vital to the smaller nations as to the greater. For instance, the exclusion of Asiatics is as vital to the interests of Australia or New Zealand as the preservation of the balance of power in Europe is to those of the United Kingdom. The smaller nations cannot therefore be expected to co-operate on a representation which may leave their interests at the mercy of a majority. This is a point that will have to be very carefully thought out, and no doubt time, education, and the rise of the Dominions will tend to equalise matters and smooth away difficulties. We are, however, concerned here rather with the principle than with the details by which effect is given to the

principle. Considered on broad lines the practical difficulties do not seem to be insuperable. It is probable that the Prime Minister of the United Kingdom would be 'ex-officio' President of the Imperial Federal Council formed on whatever basis of representation, which Council would have the absolute and unfettered control of the naval and military resources of the Empire, and would conduct all matters arising from a state of war.

The next stepping stone would be the transference to this or a similar Council of the conduct of foreign affairs. The Dominions are not likely to agree for long to the control of Imperial policy being vested in a Cabinet which may owe its existence to a party struggle fought on any but Imperial issues. It is clear that policy must be separated from politics, for there must be one policy for the Empire, if it is to stand, whereas local politics may and will take diverse directions. And it is equally clear that the same set of men cannot be responsible for both. "A man cannot serve two masters....." we are told and it does not seem any more possible for a statesman to serve both the Empire and his own party.

So far the United Kingdom has been able to provide for the defence of the Empire out of her own resources, but it is becoming evident that she can do so no longer. She can, therefore, no longer claim the right of being sole arbiter of the fortunes of the Empire. To place the control of Imperial and foreign affairs in the hands of an Imperial Federal Council representative of the whole Empire would surely be the easiest and most reasonable solution of the problem. And as Imperial policy and Imperial strategy must necessarily be closely associated, there would be vested in the one body, not only the control of the Imperial services, but also the power to make treaties, peace, and war, and to conduct the relations of the Empire with foreign States.

Since the Coronation of June 1911, the theme of Empire has been on many lips, and the output of literature on this subject has been immense. From the same time also has been felt a marked increase in the influence and importance of the throne, which has now come to mean a real bond of the unity between the scattered portions of the Empire. Nor are signs wanting that the trend of political feeling throughout the Empire is set towards the ideal of Imperial unity. The time may be near or far when the perfect structure of the British Empire will be completed, when the Parliaments of the kingdoms and states comprising that Empire will deal only with their own domestic affairs, while a true Imperial Parliament will advise the King-Emperor on all Imperial matters. That time may be near or far, but that it should come as early as possible must be the constant hope of every good citizen.



## FOR THE CONDUCT OF AN ARMY CHARACTER WEIGHS MORE THAN KNOWLEDGE OR SCIENCE.\*

**A Lecture delivered at Simla on 30th July 1913 by Brigadier-General Walter Braithwaite, C.B., General Staff, Commandant, Staff College, Quetta.**

I have taken for the subject of my lecture the following quotation from von Moltke, namely, "For the conduct of an army character weighs more than knowledge or science." Having taken it, I was faced with a consideration of the effect of "system" on the conduct, or leading, of an army; system as displayed in the Franco-Prussian war in the German army, and, perhaps even more so, by system as displayed in the Russo-Japanese war in the Japanese army. Can a system, however perfect, replace the effects of character (that is, the individual characters of the Commander-in-Chief and the subordinate Generals, especially those in independent commands) ?

Perhaps, before I go further, I had better explain what I mean by system. I mean that system of command about which von Moltke ever prided himself more than he did about anything else. The story is told—and with truth, I believe,—that when some admirer of his was recalling to the veteran's mind the greatness of his victories over the Austrians in 1866 and over the French in 1870, von Moltke told him that he had something to be prouder of than those victories, and that he had gained those victories by, and given a greater heritage to the German army in, the system of command, which he had taught and developed in the armies of Germany. This system of command he had taught by a series of "letters" to Generals and other high officers, and in Staff Tours which these Generals attended, in which he laid down the principles of command, and developed theory in a manner which taught those to whom these "letters" were addressed "to think alike on all matters of principle." The consequence was that, when the German armies went into the field, each General, in taking a certain course, knew that his action would be understood, knew that he could never be left without help from troops who were near enough to come to his assistance, knew that, when he could not get positive orders or direct instructions, if he acted on certain principles, he would be acting as other Generals would have done in similar circumstances, and that, therefore, having been taught to act by judgment, and not by rule, his action would fit in with the general scheme of the Commander-in-Chief. Such, very briefly, is the system of command which obtained in 1870, which was the product of von Moltke's genius, and which exists to-day in the German army of 1913. Such

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\* This lecture is published in the form in which it was prepared for oral delivery ; there has been no time to re-write it as an article.



also was the system which Meckel taught the Japanese, and which the Japanese adapted to the circumstances of their army with such marked success in the Russo-Japanese war. But, however great the system, and however well it be understood, there remains, and always must remain, human nature being what it is, the influence of the character and of the personality of the commander, and of the subordinate commanders. There never yet has been a great commander who has not possessed character. There never will be. However much a system may be perfected, there must remain the personal factor of the man who leads an army in war. And he who would read military history aright, and he who would get from it its best lessons for the future, will fail—and fail miserably—unless he looks below the surface, and finds out the effect of character and personality.

We know that Stonewall Jackson was a great student of Napoleon's campaigns; we are also told that "no one realised more fully than he, that Napoleon's character won more battles than Napoleon's knowledge."

We are told that "resolution is the most brilliant quality in the conduct of a great battle," and I propose to discuss this afternoon two great battles in which this quality of resolution is conspicuous both in the Generals commanding, and in the troops who fought these battles. I know of no better examples.

We hear a great deal about the science of war, about the art of war, the principles of war, the theory of war, and so on, and so forth. And we hear, from soldiers and civilians alike, a certain amount—sometimes a good deal—about "the practical soldier." We, also, hear the practical soldier belauded at the expense of the theoretical soldier. But a good deal, in fact, I think perhaps the greater part, of all that we, commonly, hear on this latter subject is based on a misapprehension of what a practical soldier really is, and, certainly, of what a theoretical soldier is. People are very fond of quoting the late Sir John Colburne (afterwards Field-Marshal Lord Seaton) as saying, when asked how he learned war—"By fighting and a damned deal of it." Fortunately, or unfortunately, we are not always at war and, therefore, war (which, undoubtedly, is as Lord Seaton said, the best school for learning war) is not always available as a teaching medium. We have, therefore, to turn to the next best means, which are the authentic records of war. And if we do turn to military history, we find the true value of the practical soldier and of the theoretical soldier, and we get the real meaning of "practical" and "theoretical," so far as soldiering is concerned.

If the strictures we hear about practical and theoretical soldiering were founded on experience in war, or on the teachings of military history, few of us would have any complaint in the matter. It is, however, because these terms are so generally misapplied, misunderstood, and misquoted, that it is just as well to be clear on the point. There are, really, very few practical soldiers who have

not been great students of the art and science of war, very few who have not based their practical knowledge on theory. There are, in this world, very few heaven-born geniuses (though there are a good many people who think themselves so). To be really, and truly, and thoroughly practical you must know theory or you will be led into very unpractical ways. Theory should "educate the mind of the future leader in war, or rather guide him in his self-instruction," but not accompany him to the field of battle. Theory, in fact, must be gained by observation and study, and not become of the nature of a doctrine.

Napoleon was one of the few heaven-born geniuses, but it would be hard to find a more industrious student, just as it would be difficult to discover a keener intelligence or a more intense energy, and, certainly, no man has ever understood human nature better or handled his men with more consummate skill and tact.

We come, therefore, to the conclusion that we want, as commanders, men of character enough to know when to discard theory or, rather, to keep theory subservient; who have got the principles of war, the theory of their profession, so ingrained in their nature by study that their brain rejects, almost without their being aware of it, all but the right principles, so that they instinctively choose the right course, in fact, men who have had the necessary force and strength of character, and the necessary knowledge and science, to command men. You may say that that was all very well, and indisputably a fact, 100 years ago, when battles were fought under the personal supervision of the commander. But now the fronts of battle are so extended that personal supervision is out of the question—where does character come in?

It is to meet these and similar objections that I have chosen, to illustrate my meaning, a battle like Mars-la-Tour, the extent of which was controllable personally by one man, and that of Liao Yang, where Oyama was 20 miles in rear of his fighting troops, where personal control was difficult, if not impossible, but which, to my mind, rendered the character of the commanders of even more account.

The advent of the "system" of command, to replace one-man control, does not, in any way, lessen the necessity for "character" in commanders but, indeed, emphasises its importance, as, in some respects, it increases its difficulties, for character is required in subordinate commanders to an even greater extent than heretofore. Moltke's system of command was based on a thorough knowledge of the theory of war, combined with an equally thorough knowledge of human nature, and that is why that system emerged triumphant from two great wars, and has continued through the long years of peace since those wars were fought. That is why that system has been more or less copied, or adapted, by other nations, with success [dependent on whether that system has been adapted rather than copied in accordance with the characteristics of the race which has taken it as a model either in war or in peace].

I read, some time ago (I am sorry I cannot quote the author, but I hope, if ever he should read this lecture, that he will forgive me for not acknowledging to him my indebtedness by name) a very good definition of "principle." "Principle," he says, "is a fundamental truth as a basis of reason" and "command" he defines as "control, mastery, possession." "Therefore," he says, "the principles of command are the fundamental truths which are the bases of reasoning about the control, or mastery, of an army in the field." That sounds very simple, and the great fundamental principles of war are easily understood, or, rather, I should say, are easily learnt. So easily are they learnt, that their simplicity is self-evident.

It is their application which is so supremely difficult. And that is where character (and personality) comes to the front, that is, in the application of these principles.

And herein lies the great difference between theory and practice. Theory consists in knowing, and understanding, the principles of war; practice consists in putting them into execution, *i.e.*, their application. It is but little use knowing the principles unless you can apply them, and, however well you know them, you are unlikely to be able to apply them unless you are a man of character. That is the teaching of history. However perfect the system, however good the knowledge, however thorough the science, there comes a time when this system, this knowledge, this science is put to the supreme test of a man's boldness to apply it. And according as they are applied whole-heartedly, half-heartedly, or timidly, lies the difference between a great general, a mediocre general, and a general of no account.

Having got thus far we must pause a moment and consider a little more closely, since it is all important, this characteristic of boldness. Boldness undoubtedly derives a certain amount of its power from the weakness of others when it has gained the mastery; it is, therefore, a creative power, as Clausewitz tells us. And its great opponent is prudence or caution. And prudence and caution are apt to develop to the detriment of boldness with advancing years, and men are generally of advanced years—nowadays at any rate—before they have risen high enough to be thought fit to lead armies in the field. Yet the higher the rank the more necessary it is that boldness should go hand-in-hand with reflection. For the consequences of decisions are more far reaching. In a comparatively junior commander boldness—say, even, rash headlong boldness—may have only a local effect.

In a commander of an army, it may endanger the cause of the country, and it will certainly have its effect on a far larger number of men. Still, whenever and wherever it is met, boldness is a fine quality, whether it be mental or physical, and only when it strikes at the root of obedience should it be repressed.

"Boldness, directed by an over-ruling intelligence, is the stamp of the hero." But how often do we find this boldness? Only in the great names on the pages of history. For there are so many other

qualities necessary in a great commander, which war against this quality of boldness, *e.g.*, imagination, powers of deduction, of discernment. Then there are, in addition, pressure from outside, the seeing of difficulty by others for whose judgment we have great respect, and a hundred other things you can think of.

All these tend to keep boldness in subjection. Yet boldness is essential. So we find that boldness is, ever, one of the characteristics of a great general, that boldness which cannot only make a bold plan—many can do that—but which can see that plan through, whatever the difficulties, however great may be the objections urged against it, and however reasonable those objections may seem.

*Le bon général ordinaire* may arrive at a good sound bold plan after careful thought and much reflection—but let difficulties crop up, and dangers threaten, and disinclination to face heavy responsibility—that foe of boldness—rear its head, and he seems to lose what Clausewitz calls the power of “comprehensive vision” and even if others can supply him with this, he will lose his power of decision because for that he must depend on himself alone.

Boldness, then, is one of the first requisities for a commander. It is inborn and becomes developed by education, by knowledge and science indeed, and, undoubtedly, it is more likely to be found in a commander of, say, under 50 than over that age (for I need hardly remind an audience such as this that nearly all great commanders have done the greatest deeds when young, *e.g.*, Wellington and Napoleon were only in the forties when Waterloo was fought, *i.e.*, about the time we—if we are lucky—are half way up the list of Majors in a regiment).

I have read that almost all generals who, in history, are ranked as mediocre, and as wanting in decision when in supreme command, were men who had a high reputation for boldness and decision in their earlier career, *i.e.*, when the responsibility was less, and the effect of their decisions less momentous. No one could accuse Napoleon's marshals of having learnt war in any school other than war, yet how many of them were there who possessed the necessary boldness, and character generally, to achieve success when entrusted with independent command? You can count them on the fingers of one hand, and not use many of the fingers either! To sum up, then: to find the bold way is comparatively easy, but to follow that way in accordance with the plan formed, despite a thousand reasons for deviating therefrom, requires great clearness of mind, steadiness of aim and remarkable strength of character, and out of many men who have great clearness of mind, of men who have purpose, of men who have strength of character and boldness—there may not be one who combines all these qualities; yet all are necessary to raise him above mediocrity as a general.

And before I proceed to give you the examples which I have chosen, I should like, with your permission, to be allowed to try and sketch, however inadequately, a picture of a commander on the eve of battle. It is well known that on the information received

at the head-quarters of an army the ultimate plans must be formed. It is equally well known that, of that information, much is false, much is conflicting, and by far the greater part is misleading. It is the duty of the Staff to sift this information, to test its reliability, to weigh its value. Imagine, therefore, the responsibility thrown—however good the system—on one man, the Commander-in-Chief, who has to make the ultimate decision, on whose decision depends not only the issue of the battle, not only the lives of thousands, but, perhaps, the fate of his country. Let me try to picture the conditions under which that commander has to frame his decision. Say he is a man of 60. Severe mental strain; several physical strain; in fact, all his mental and physical powers taxed to the utmost limit; the nearer he comes to the day of battle the thicker the fog of war, and yet his eye must pierce the fog, his brain must control the brain of his adversary, his will must impose itself upon that of the leader of his enemy. And his decision, once formed, must be translated into perfectly clear, concise directions, or orders, as the case may be. In as few words as possible his thoughts, his very determination, must appear in the written words issued by his Staff to the army; and these orders must convey not only his directions but, as I have said, must also convey his will—that is the determination and inflexibility, to conquer at all costs. "Knowledge can be imparted by a hundred methods, wisdom may be slowly instilled into the mind, character only is infectious." That infection must be transmitted through the medium of his orders.

If the general is a man of character, and if his Staff have been trained on a right system, and if the army is a living organism, and not a machine, then things will go right; but a badly expressed order, a word that can be misunderstood, and things may go wrong, unless the system of command has been perfected in peace time, and can correct whatever may be wrong in the tone of the order.

Knowledge, science, character, all these are requisite in their degree. And if, as Moltke says, character weighs more than knowledge or science, he only says it weighs *more*—it does not say it can do without them. It is like "faith, hope and charity, but the greatest of these is charity." So also, knowledge, science and character, but the greatest of these is character. Iron resolution, dogged perseverance, personality which inspires devotion, such as the personality of Napoleon or, at the least, respect and confidence, like the personality of Wellington. A personality that makes the men under you ready to do anything and go anywhere for you. In fact, what is required is a man who never shrinks from responsibility, even responsibility of the kind that confronts the commander of an army, the greatest responsibility that can confront any man. As Henderson says, "to risk cause and country, name and reputation on a single throw, and abide the issue with unflinching heart is the supreme exhibition of the soldier's fortitude."

We Englishmen set great store on character. It is one of the things which especially appeals to us. It appeals to us a great deal

more, I think, than the possession of knowledge or science, and rightly so. Evidently we exalt character above everything, and it is so from our earliest days. Our public schools—of which we are justly proud—what do they teach? Knowledge? Perhaps. What do we, ourselves, think we learned most at the public school to which we were sent? And for what reason do we choose a public school for our sons? Is it a school where they learn best? Is that the particular public school that we are proudest of? It may be. But great admirer as I am of our public schools, I think that learning, properly so called, is the least value our sons get out of an English public school. What we really pay three hundred golden sovereigns a year for is that our sons shall be taught to be men, and that their characters may be formed in accordance with the way that we know it will be formed at that particular school. In fact take it as you will, in any branch of life it is character that counts.

And now to examine, from the point of view of character—necessarily, quite briefly—the battles of Mars-la-Tour and Liao-Yang, and to see, in each of these battles, what, evidently, made for success and failure, to examine the part played by the troops themselves (that is as regards training, discipline, and subordinate leadership), and to come to a conclusion.

And before I begin to describe Mars-la-Tour and Liao-Yang, I would like to give you, quite shortly, my reason for choosing the battles of latter day Generals, in preference to the Napoleons, the Wellingtons, the Suwarows, the Hannibals, the Cæsars, et cetera. For one reason, these battles are freshest in our minds, they are battles of modern times, and they are battles fought, in the case of Mars-la-Tour, by a General whose name I expect only about half this audience knows, and in the latter case by a General whose great qualities were resolution backed up by a brain developed in the system of von Moltke. Every student of war knows the influence of the personality of Napoleon, the iron determination of Wellington, the dogged perseverance of Suwarow, the cunning of Hannibal, and the genius of Caesar. I have, therefore, taken to illustrate my meaning a Corps Commander of the German army in 1870, and the Commander-in-Chief of the Japanese armies in 1904.

Our doctrine of war, contained in the Field Service Regulations, in the chapter dealing with the battle, and in the paragraph dealing with the considerations which influence a commander in offering battle, starts thus:—"Decisive success in battle can be gained only by a vigorous offensive."

1. Decisive success in battle can be gained only by a vigorous offensive. Every commander who offers battle, therefore, must be determined to assume the offensive sooner or later. If the situation be unfavourable for such a course, it is wiser, when possible, to manœuvre for a more suitable opportunity; but when superiority in skill, *moral* or numbers has given a commander the initiative, he should turn it to account by forcing a battle before the enemy is ready. Superior numbers on the battlefield are an undoubted

advantage, but skill, better organisation, and training, and above all a firmer determination, in all ranks, to conquer at any cost, are the chief factors of success.

2. Half-hearted measures never attain success in war, and lack of determination is the most fruitful source of defeat. A commander, who has once decided either to give or to accept battle, must act with energy, perseverance and resolution.

I think I can, perhaps, better show what is meant by the above quoted paragraphs by a very short account of the battle of Mars-la-Tour in 1870 and of the battle of Liao-Yang in 1904.

On the 14th August 1870 was fought the battle of Colombey, a more or less indecisive battle, and all day long on the 15th August the French were passing through the narrow streets of Metz, and wending their way westward with the object of gaining the Verdun road. They did not make much progress—the reason why you probably know (the military portion of my audience, at any rate)—but, in any case, it was largely due to defective Staff arrangements, to the absence of all higher leading and direction, the narrowness of the Metz streets, and the fewness of the exits from that city. The Germans, on their part, had advanced to the Moselle, some few troops had crossed, others were in positions ready to cross, the points of passage having been obligingly left unguarded and unbroken by the French. Von Moltke thought that the French would use every endeavour to retreat as quickly as they could westward, and his order to Frederick Charles on the 15th was “Pursuit with all available forces along the Metz-Verdun road important.” Frederick Charles’s army lay opposite the crossings of Noveant and Pagny, with orders to cross early on the morning of the 16th. Frederick Charles, I may explain, hardly agreed with Moltke’s appreciation of the situation, and thought that, when he had crossed, he would have only a French rear guard to deal with. The commander of the Third Corps, which was the first to cross, von Alvensleben, thought differently to the commander of his army, and he was determined to use every available means in his power to arrest the French retreat. He was under no such misapprehension as Frederick Charles, and so he hurried his troops across the river; his troops consisted of his own Army Corps and the 6th Cavalry Division. To gain the open plateau, along which winds the Metz-Verdun road, he had to issue from a narrow defile, known as the Gorze defile. Leaving his troops laboriously climbing the steep hill up from the river-bed, he went on to reconnoitre, and, on gaining the plateau, he met von Rheinbaben, commander of the 5th Cavalry Division, who, early that morning, had surprised a French camp near Vionville. Rheinbaben was not a great cavalry leader nor was he a very clever man, but he made a shrewd observation that morning. What he said to von Alvensleben was this:—“I don’t know whether I am a bigger fool than anyone else but I have always thought that the whole French army is in front of us, and now I am sure.” As a matter of fact, Rheinbaben was right and the whole of the French

army, consisting of five Corps and two Cavalry Divisions, lay, practically, between Vionville and the outskirts of Metz. So here was von Alvensleben faced with as difficult a problem as any General could have been faced with in war. Available to his hand was one Army Corps and the 6th Cavalry Division. And now he had found the 5th Cavalry Division, so that he had two Cavalry Divisions and one Corps. And he did not know how soon, or if, he would be supported by any other troops. He thought, however, that his mission must be to arrest that French retreat in order to enable von Moltke to carry out his plan. Moreover, he saw that no half measures would serve, and he doubtless knew, having by this time summed up the characters of his opponents, that the best way to delay the French would be to attack. And he never hesitated. I cannot pretend to describe the battle. Suffice it to say that from about 9-30 A.M. till 3-30 P.M. von Alvensleben with his two Cavalry Divisions and his own Army Corps fought against the whole French army. He started with a vigorous offensive; by 1 o'clock his offensive was turned into a defensive attitude; and at 2 o'clock, by the splendid sacrifice of such of his cavalry as could be got together, he had partly regained the initiative; but until 4 o'clock he was practically forced to be on the defensive; shortly after this welcome reinforcements began to come in; and by night-fall the French were definitely prevented from retreating from westwards. Two days later, as a direct consequence of von Alvensleben's action on the 16th August, the battle of Gravelotte was fought and Bazaine and his army shut up in Metz.\*

That is one of the grandest examples in military history of character, aided by knowledge and science, displayed by a commander against overwhelming odds. It is a standing lesson for all time of what character, backed up by magnificent fighting qualities on the part of the rank and file, can achieve. And this character was necessarily reflected in the action of the subordinates; as witness the attack of the 6th Division (Infantry) against Vionville and Flavigny; as witness von Bredow's charge to afford a breathing space to the sorely tried infantry—a charge which, though only made with six squadrons, resulted in twelve French batteries abandoning their positions in order to refit—only two appeared again! One infantry regiment and twelve companies of other infantry regiments took no further part in the fight; immense pressure was lifted from the hard-trying German infantry and, as a direct consequence, an exaltation of *moral*; as witness the reply of the artillery commander, when applied to by some of his subordinates to be allowed to withdraw, because their ammunition was nearly spent and nearly all their men and horses killed—the reply was that the artillery must hold on as it was the only support to the infantry and if it retired it would have a bad moral effect on that hard-pressed infantry; as witness the self-sacrificing charge of the Dragoons of the Guard to

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\* The description of this battle was illustrated by the lecturer on the blackboard.



enable the 38th Brigade to get away ; and numberless other instances, but all springing from the iron resolution and determination of one man—Konrad von Alvensleben.

And if we look across from the victorious German and see the French, what do we find ? We find enormous superiority in numbers, just as brave men waiting to be led, and leaders deficient in the necessary character. It is the old story—where there are men to lead there will always be found men to follow. In this case it was the leaders, and not the led, who were deficient, not deficient in personal courage, but in character. As witness, about 4 o'clock in the day, when de Ladmirault with a fresh Army Corps, was coming down on the German left, with practically nothing between him and certain victory, and he hesitated and—having hesitated—was lost, retired, and missed his chance. And why ? According to the account published by his own nation “he had no orders”—that fatal excuse which has lost so many battles. Neither had von Alvensleben orders to fight a battle on his own account. He had judgment, and he acted by judgment, and not by order. That is only one instance out of many. Bazaine himself, the commander of the whole, when he busied himself about anything, seemed to find the most attractive business that of directing a single battery. It was while he was doing this that he was nearly captured by a charge of German cavalry ; and, I think it is Bonnal who, in narrating the circumstances, and explaining how he just managed to escape, adds the word “Alas !”

And to show that this was not an isolated case—not one flash of character and resolution—on von Alvensleben's part, I may mention that in the later phases of the war, in what is called “the People's War,” von Alvensleben was faced with an almost identical situation, and he came up with the enemy late in the afternoon and at once issued orders for the attack. When remonstrated with—he again had only one Army Corps—on account of the smallness of the force and the large superiority of the enemy, he replied that it was the only safe thing to do as, in attacking, the enemy would be sure to credit him with far larger numbers than he possessed. And by the following morning reinforcements would be at hand. That sounds a practical reason for attacking, and I am sure we all of us like to think we should do the same. But I expect you will agree with me that it is easier to admire than to follow.

The other great battle to which I would draw attention, as exemplifying the need of character in a commander is the battle of Liao-Yang. What strikes us most in this battle as it was fought ? Was it the tactical skill of Oyama ? Was it the manœuvring power of Kuropatkin ? It was neither one nor the other. The keynote of the battle, as it was fought, is contained in the following quotation from von Moltke :—“In war everything is uncertain from the beginning except the amount of will-power and energy with which the Commander-in-Chief himself is endowed.” If any earnest student of war looks for lessons from the battle of Liao-Yang, the

lessons that will be brought most prominently to his notice are those of character—not of tactical skill, not of knowledge of the art of war, not of the science of war. What he will find to admire will be the will-power of Oyama, the energy of Kuroki, the resolution of Oku, and the determination shown by the Japanese rank and file to conquer at all costs. And what he will find, as lessons in what to avoid, in the way the Russians fought the battle, will be the irresolution of Kuropatkin, the want of energy and resolution of his subordinates (with some few exceptions) and the determination of the Russian rank and file to fight stubbornly (as opposed to fighting to conquer). It is, in fact, these qualities in the Japanese, and the lack of such qualities in the Russians, which make the battle of Liao-Yang interesting, rather than the grand tactics of either combatant.

May I just remind you of the circumstances? I cannot attempt to give a description of this great battle. I can only touch on salient points.\*

Kuropatkin with superior numerical forces was awaiting the Japanese in a position—strongly entrenched—of his own choosing; an ideal situation for fighting a defensive-offensive battle, if ever there was one.

Oyama, on the other hand, had but two out of his three armies concentrated and, moreover, before he could concentrate his forces the weaker portion—Kuroki's army—would have to capture the Russian positions on the Tang Ho. That is to say, Oyama had to concentrate his inferior (numerical) forces literally “under the beard of the enemy,” and we know what Napoleon has to say about that operation.

Kuroki began to move on 23rd August, and not till 29th were his forces concentrated—and the battle lasted till the 4th September. It divides itself into four distinct phases or periods—the first phase from the 25th to the 27th August (the Japanese attacked the first Russian position; the Russians defended obstinately, then retired); the second phase, from the 28th to the 31st August (the Russians occupy a second position; the Japanese follow, make a vigorous flank attack, and initiate a turning movement); the third phase, 1st to 2nd September: the Japanese plan was now disclosed; the Russians retired to a third position and organised a counter-attack against Kuroki, who had, in the meantime, crossed the Tai Tzu Ho, which counter-attack failed on the 3rd September owing to bad leadership and to the weariness of the troops; the fourth phase, 3rd and 4th September (the Russians withdrew and the Japanese were too exhausted to press their advantage).

During the battle numerous chances were presented to Kuropatkin. He, however, gained little information of the direction of the advance of the main bodies till the third phase. Moreover, by ill-advised listening to the clamours of subordinate generals for

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\* The description of this battle was illustrated by the lecturer on the blackboard.

support, he frittered away his general reserve, *i.e.*, the body of troops with which he hoped to make the decisive counter-stroke. On the 30th August, however, bravely as the Japanese attacked, so little success met their determined efforts that, as our official account says, "at every point the attack upon the Third Siberian and Tenth Corps ended in failure and, for the first time during the war, the Japanese troops went to their bivouacs smarting under a sense of defeat."

Meanwhile Kuropatkin had massed 93 battalions, 73 squadrons and 352 guns under his own command, to hurl himself against Kuroki's two divisions. On paper it looks as if the Russian attack must succeed, for Kuropatkin had left sufficient force to garrison the works round Liao-Yang and all detachments to guard the flanks and rear. I don't propose to give you a detailed account of this attempt at the counter stroke. It is a record of failure on the part of the general in chief command, and of failure on the part of the subordinate leaders to act with sufficient energy and judgment and, generally, to make the best of the task allotted to them and it is a failure again on the part of Kuropatkin to choose the right course at the critical moment, that is, between accepting defeat and making a last bid for victory. For in his mind appears to have been always the fear of the danger which he thought was threatening his communications, and he issued orders for a retreat on Mukden.

What I would like to make clear is that, throughout this battle, which is a record of determined attacks on the part of the Japanese on strongly fortified positions obstinately held (but with no offensive hitting—back power—with one exception) the Japanese only took two fortified positions from the Russians. The Russians defended their positions, as I have said, stubbornly, subordinate generals asked for reinforcements and got them, and then—having fought all day—were withdrawn at night by the Russian Commander-in-Chief. That is to say, an exhausting day of fighting was followed by an equally exhausting night of marching. It is not, therefore, very wonderful that, when the troops were asked for a final effort—that is, for the decisive counter-stroke—they were unequal to the required effort. It is, as I said in the beginning, much more the record of will-power and determination on the one side, and the want of these qualities on the other side, that make the battle of Liao-Yang interesting. May I make one quotation from our official account of the battle? "Although the policy actually adopted by the Japanese Commander-in-Chief—of pressing on—required immense determination of character and involved risks which a less resolute commander might well have refused to take, there can be little doubt that he was right in deciding to extricate himself from his difficulties by persevering in his original course and driving the enemy back until he could unite his own armies on one continuous front." This alludes, of course, to the time just before the battle.

The battle then is remarkable for two outstanding features, the first of which is that an army occupying strongly fortified positions

of its own choice was attacked deliberately, and defeated, by one which was numerically weaker; and the second is that the commander of the weaker side divided his forces at a critical moment of the struggle, that is to say, when Kuroki crossed the Tai Tzu Ho at the time when the Japanese attacks were—to put it mildly—unsuccessful.

Not till the evening of the 29th had Oyama got his forces concentrated. Yet it was at this moment that he thought of detaching a large fraction of one army and again dividing the Japanese forces. Our official history calls it “one of the most momentous decisions to be found in the history of war.”

Kuroki crossed the Tai Tzu Ho believing the Russians to be in retreat. He received a letter on the 28th August from Oyama telling him to be prepared to take this course, if necessary. And on the 30th one and a half divisions of the First Army crossed the river; and they crossed at the time when the main attack of the Japanese forces against the Russians had failed completely all along the line.

The circumstances on the evening of the 30th were as follows:—The Japanese spent the 30th in delivering, with their main force, a series of desperate attacks which had almost entirely failed. In fact, the Japanese had been repulsed, and they were practically without reserves, while their enemy had large masses of fresh troops within reach. As the official account says, “the tide of success seems to have turned in favour of the defenders in a manner which might reasonably be presumed to have suggested restraint to the attacking side.” What was now to be done? Since there was not much likelihood of gaining success by a repetition of direct assaults on the Russian fortified position, there remained the alternative of pressing in another direction to relieve the pressure. This was the alternative that was adopted and, successful as it proved, it was really, at the time, a desperate measure which, had it failed, would have entailed nothing short of disaster.

The success gained shows that, against an adversary who is either unable or unwilling to hit back, a determined and bold commander can take almost any liberty.

And a meed of praise is due to Kuroki. Once he was across the Tai Tzu Ho, whenever he was in a position of extraordinary difficulty—and this occurred many times—he extricated himself, simply, by seizing every possible opening for attack. By these methods, by this iron resolution to press forward at all costs, by these offensive tactics (the outcome of determination and real character on the part of the Commander-in-Chief and his subordinates) was this battle won—not by knowledge, not by science.

There is one point which, before I conclude I would like to bring to your notice. All through this battle Kuropatkin believed that the Japanese were in superior strength—superior in numerical strength I mean. He was quite right in believing that they were superior in real strength, for their “moral” made up for their lack of numbers, and we know the old saying that the moral is to the physical

as three is to one. We may say, therefore, that Kuropatkin was right. But we read a great deal just at present about aviation—the kind of aid that aeroplanes and dirigibles will be to commanders in gaining information, or, perhaps, more especially, in confirming or supplementing information. Supposing that both Kuropatkin and Oyama had had at their disposal a fleet of aeroplanes, that one or other fleet had been successful, what effect would the information which these craft could have brought them have had on the conduct of the battle by the rival commanders? Take Kuropatkin. He would have been quickly undeceived in regard to his idea about the numerical superiority of the Japanese. He would have seen that they were “all in,” that they had practically no reserves left, and he would also have seen the smallness of the force that crossed the Tai Tzu Ho and separated itself by a wide obstacle from the remainder of Oyama’s forces. Would he, in the light of this knowledge, have acted as he did? Would he have been so ready to give up his positions south of Liao-Yang as he proved to be and did? Would he have been so nervous in regard to his communications? Would he have reinforced his subordinates from his reserves if he could have known that there was no need for such reinforcement? And would he not, therefore, have had at his disposal fresh troops for the decisive counter-stroke which was in his mind from the beginning of the battle? Might not aviation, in fact, have supplied him with the necessary resolution?

I hope I have not been too adversely critical in regard to the want of resolution attributed to Kuropatkin in his conduct of this battle.

In case it may be thought that the strictures are too severe may I make a quotation from the speech made by that general to the attachés when bidding them farewell? It seems to support my contention:—

“Thus as you see, we carried on the war, being from the first unfavourably situated both in a material and moral sense, as compared with our enemy. It may be that another commander, a Napoleon, a Suwarow, a Moltke might have been able to contend with the material difficulties presented by this campaign, might have found ways and means to overcome all obstacles, might have known how, by the magic of his name, and the strength of his moral influence, to infuse the necessary exaltation of mind into the army, to call forth in his subordinates the exercise of their whole strength, and to breathe into them energy and confidence in ultimate success. But I was, and remain, simply old Kuropatkin.”

And take the other side for a moment. Would Oyama have pressed forward in the way he did had he known the true state of affairs on the opposing side? And more important still, had he known that his own dispositions would be equally well known? Would he have allowed Kuroki to separate himself in the way he

did from the main army—in the highly dangerous manner which he did allow?

Frederick the Great said truly that, if we knew as much before a battle as we know after a battle, we should all be great generals. And it seems to me that where character comes in is in gauging the weakness of your opponent, and the weak joints of his armour, of seeing which are the points about which your opponent is most likely to be afraid. At present, when a commander has to form his plan from the information at his disposal, he has to make certain deductions, and having made these deductions, to formulate his plan. Then (if he is a man of real character) he sticks to his plan. Theory, knowledge, science—call it what you will—has educated his mind and enabled him to deduce which are the weak points of the enemy's position, of the opposing commander's character, in fact, enables him to deduce what are the odds in his favour. Napoleon, as you will remember, always reduced to a system of odds, the chances for or against a certain course of action; and the same process must go on, more or less, in the mind of any commander before a battle.

Then, having made the deductions, character comes in in applying your plan. Is aviation going to make character of less account than before? Or of even greater account? I do not know—I do not suppose you do. But it is a fascinating subject for speculation and, as yet, it can be only speculation. We cannot tell what effect aviation is going to have either in the method of securing information not securable by other means, or, if secured, on the mind and character of the Commander-in-Chief.

For instance, in this battle of Liao-Yang, it is generally conceded, I think, that Kuroki crossed the Tai Tzu Ho owing to a misapprehension—that misapprehension being that the Russians were in retreat. Had aeroplanes been present, with skilled observers, they would have been able to correct this misapprehension, for the supposed retreat was not a retreat. Had Kuroki then known the truth, would he have crossed the Tai Tzu Ho, when he did? And, if he had not crossed the Tai Tzu Ho, what would have been the result on the battle of Liao-Yang? It might not have meant the winning of the battle for the Russians, but it certainly would not have been favourable to the Japanese.

Undoubtedly, however, the success of the Japanese at this and other great battles in this war was due to initiative and the real offensive spirit—the desire to press forward at all costs and seize every chance that lay to their hands. It is legitimate, therefore, to speculate as to whether information of a positive nature gained by aeroplanes might have impaired this initiative, and perhaps induced a caution which might have led to less successful results. That, however, is all in the region of speculation. But it is always interesting to speculate on new inventions and on the effect that they may have on warlike operations. And as such it is to be commended to our study. And now what is the conclusion of the whole matter?

I read somewhere, not very long ago, that "it is a difficult and dangerous period in the life of any great undertaking when caution begins to get the upper hand of confidence." I have failed entirely in presenting to you the very brief sketches of two great battles (Mars-la-Tour and Liao-Yang) if I have not demonstrated that the characters of von Alvensleben and of Oyama were the dominating features in these battles. It is true that I have taken my examples from two battles which appeal to me as being great instances of the effect of character; but, did time permit, I could give you many other instances. You will find character, rather than any other quality (though aided, perhaps, by other qualities), the predominating feature in the success of the battles won by the great Napoleon—and, certainly, in these smaller battles won by his faithful disciple, Stonewall Jackson. And so you would find it if you go down the list of battles in history. Why? Because war is intensely human; and because all war is more a struggle for the mastery between two men—that is, two commanders—than it is between the masses of men who serve under their command.

And attractive as sound the theories for the "deferred offensive," for the defensive-offensive, or for any other forms of war, which certainly are attractive from the theoretical point of view, we come in the end (with very few exceptions) to the offensive battle, to the offensive spirit in battle, as the first step to victory. For amongst all the lessons of wars I would give pride of place to the value of the offensive. If there is one lesson which stands out in the very boldest relief it is this. I do not intend to bore you with specific examples. You can remember them as well as I can. But what I would ask you to bear in mind is this—that this spirit of the offensive must be the outcome of education, real education, throughout the army. It must be the inward conviction of every officer and man that no success in war may be looked for save in offensive action. Better, far better, an error of judgment than a lack of initiative. But remember that this presupposes that initiative has been trained in peace time—it does not apply to silly, irresponsible initiative. Remember too Oyama had the nation behind him. Kuropatkin had not.

"To make war is to attack," says von der Goltz; and, in that short sentence, he sums up the offensive spirit of that great army to which he belongs—the desire to conquer, the determination to win, which animated the German armies in 1866 and 1870 and the Japanese in 1904. "To pursue a great object with energy and perseverance;" to count your losses after the battle, not before; not to put your trust in entrenchments nor in any child of fortification, except in so far as they may be made aids to offence, in so far as their passive strength may enhance the active rôle of the army.

Remember what Kleber—himself a great General—said of Napoleon—"Well, then, what is his great quality? For, after all, he is an extraordinary man. It is to dare, and then to dare more. In this art he goes beyond temerity itself."

How often do we hear such expressions as "It is impossible to attack over such open ground." Surely none of us will ever acquiesce in such statements, for we shall remember the attack of the Third Corps at Mars-la-Tour, the Guard Corps at St. Privat, and—last but not least—because carried out under the latest modern conditions—the attacks of the Japanese at the Shaho and other battles. There should be no such word in the dictionary of a soldier as "impossible." Mobility, power of manœuvre and the offensive spirit are the requisites for success and, these elements being present, nothing is impossible.

In the big hall at Osborne, where they teach little English boys to become naval officers, there is inscribed in letters of brass a foot long "There is nothing the Navy cannot do." That is the true spirit to inculcate.

There is no ground too open to attack over, if it be necessary to make the attack, or a portion of the attack, over such ground.

This lesson of the offensive is easy to learn, because it stands out in bold relief on every page of military history. It is, therefore, easy to write about and an attractive subject to allude to in a lecture. But let us not minimise its difficulties. Let us realise that, of all things necessary to pursue a consistent offensive—whether strategical or tactical—a commander of inflexible purpose and iron resolution is needed. It is so much easier to "wait and see." In the stress of conflicting influences prudence may seem so much the better course. Character, in its highest development, will alone enable a commander to adhere to his plan, and character alone will enable him to infuse into his troops the necessary spirit of self-sacrifice and devotion required to maintain the offensive spirit.

The will to conquer—conquers.





## THE WAR WITH NEPAL.\*

### Operations in Sirmoor, 1814-1815.

BY COLONEL L. W. SHAKESPEAR, INDIAN ARMY.

#### BOOKS OF REFERENCE:

Life of Rollo Gillespie.  
Memoirs of Gillespie by Egerton and Thorne.  
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Narrative of Nepal by Capt. T. H. Smith, P. A. in Nepal, 1841.  
Records, 53rd Foot.

As a supplement to Colonel Hamilton's recent excellent article in the United Service Journal on Ochterlony's operations from Loodianah against Malaun and Bilaspur, an account of those of General Gillespie's forces in Sirmoor may not be without a similar amount of interest. For the benefit of those unacquainted with the origin of this little known war it may not be out of place to recapitulate briefly what led up to it; although Colonel Hamilton has touched on the matter in his carefully compiled article mentioned above, and he has also frequently alluded to the assistance expected by Ochterlony from Gillespie's force, and mentioned how the movements of one depended in a large measure on the movements of the other. The war with Nepal was forced on the British by a long series of aggressive acts covering a period of some 25 years prior to 1814; the actual deeds provoking us to retaliation being their seizure of the districts of Botwal and Sheoraj near Gorakhpore, and their refusal to evacuate them. Lord Hastings at once gave orders for the preparation of an army of 30,000 with which to invade Nepal. The period was not altogether favourable for this large undertaking—India was still in a disturbed state, the first Pindari war had only ended two years before, Scindia and Runjit Singh were both watching their opportunity to attack us, and had large forces close to their respective borders, while the Peishwa was intriguing with both against us. Therefore great importance was attached by Government to success in this campaign, as a strong confederacy amongst the other States was much feared; and to overawe these, and act at once should occasion demand, Lord Hastings sent orders to the Madras and Bombay armies to advance close up to their respective borders and thus to cover the operations against Nepal. He planned four expeditions against prominent points on the frontier, two Divisions acting in concert between the Sutlej and Ganges, one from Benares against Botwal, and one (the largest) from Dinapore against the capital Khatmandu. The Northern Division was

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\* An account of Ochterlony's operations appeared in the Journal for April 1912

assembled at Loodianah (our then frontier station) under General Ochterlony, whose object was to move against Amer Sing Thapa, the Nepalese Governor of what we now call the Simla Hills; while General Gillespie commanded the other Division, with the object of attacking the Nepalese in the Doon and Tehri. The Nepalese had gradually consolidated their power in the hills up to Bilaspur on the Sutlej, while they made themselves felt as far north as Cashmere; but they had only been in the Doon some four years before hostilities began. General Gillespie had recently been appointed to the command at Meerut, when war broke out, in fact he had hardly taken over when he was ordered to assemble and command the Division which, while co-operating with General Ochterlony's Division further north, was to move against Sirmoor (Nahan and the Doon) and Tehri, which districts were then governed by Amer Sing's son, Ranjur Sing. It may here be stated that the Nepalese entered the Doon and Nahan in 1811, a few years after the British had, under Colonel Burne, established themselves at Saharanpore, and made it a military station; this place and Kurnal were the main supports, as it were, to our then frontier garrison of Loodianah. At the outbreak of the war General Ochterlony was Commandant and Political Agent of the frontier at Loodianah, and was ordered to form an army at that station to proceed against Amer Sing on the Sutlej, between Simla and Bilaspur. As this Division was expected to meet with most prolonged resistance it was to have General Gillespie's Division co-operating with it. Both forces started from Saharanpore and Loodianah in mid October 1814. It was known that the Nepalese held strong positions both in the Doon at Kalunga, in the hills where the Jumna emerges from the main range, and at Jaithuck in Sirmoor, and of these it was imagined the most important were at Kalsi on the Jumna and at Runtam and Baraut in the hills above. General Gillespie's original intention was to force these places, and by moving up the Tons valley through the district we now know as Chakrata to reach a point near Simla, from which he could easily assist Ochterlony against Amer Sing's left. In a letter to a friend he says "..... my force is rapidly collecting at Saharanpore. I expect to make attack on the Doon about the 23rd or 24th October, and move from Sirmoor if circumstances admit about the 31st October, or 1st November in order to support Ochterlony's attempt against Nalaghar and his eventual proceedings against Amer Sing. Lord Hastings has in a great measure left the movements of this Division to myself. I am inclined to think he will find the present undertaking more arduous and difficult than he imagines, as the country in itself is so difficult of access; every mile there is a post, and the Goorkhalis are a very active and warlike people," and we will now see how he was unable to carry out his programme by the expected dates, and mark the unforeseen contingencies that invariably crop up to mar the best plans. On the 18th October a sufficient force was collected to enable a forward move

to be made and on the two following days detachments were sent from Saharanpore to seize the Timli and Keree (Mohand) passes, and to penetrate into the Doon. On the 21st October H.M.'s 53rd Foot marched and encamped in the neighbourhood of Jusmore, close to Kasumri, a village nearly midway between the two passes, with the intention of supporting either of the advanced detachments, who, after seizing the passes, were to push on and secure the ferries and fords of the Jumna and Ganges at Rampur Mandi and Rikhikesh respectively. Three companies of Light Infantry and a troop of Dragoons were posted near Badshahibagh to watch the Jumna crossing in that direction. It was expected that these passes and ferries would have been occupied, detachments of observation posted, and a junction of the forces effected, to admit of an attack on Kalunga, which it was supposed would have been taken in at least three days, or about the 27th; after which the force would have proceeded against the Nepalese positions at Kalsi and Baraut, and thence through the hills towards Amer Sing's left. On the 24th October a body of Cavalry and Horse Artillery were sent across the Jumna towards the Pinjore Valley (Scidcurn) to deceive the enemy and link up with Ochterlony's Division. General Gillespie marched *via* the Timli Pass to the Jumna, and on the 25th was passing through the Western Doon with the design of personally reconnoitring the positions of the enemy at Kalsi and Baraut, which he imagined of greater importance than the rest, when disturbing news reached him from Colonel Mawby, 53rd Foot, and commanding the troops working over the Mohand Pass into the Doon and to the Ganges. It appeared the detachment told off to push forward towards Rikhikesh and the ferry there, passing near Kalunga was stopped by the Nepalese and attacked. Colonel Mawby moved up the rest of his force\* in support, camped on the ground where the Gillespie monuments now stand, and determined to attack Kalunga at once. Leaving only a small rear guard to protect his camp, he moved the whole of his force on to the tableland some 800 yards south and some way below, the fort, and separated from it by the deep Nalapani water-course, brought up his field pieces with much labour, and after a very feeble effort against the place he retired again to camp. Aware that this would at once be mistaken by the Nepalese for our weakness and inability at the outset, and would render them more enterprising, Gillespie determined to collect his troops such as were in the Doon, which he thought sufficient for the work, while the rest of the Division still assembling at Saharanpore, making a total of 3,500 ranks was directed to move at once on Dehra. He therefore ordered up the different detachments of infantry and cavalry, together with some mortars, and two 12-pounders, which were watching the Jumna; and leaving a small force under Captain Campbell to observe and hold the enemy at Kalsi, he marched at once for Dehra, where he arrived on the 28th; and at the same time news came of the success of Campbell's party in occupying

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\* 1,300 infantry, 300 cavalry, 5 guns.

Kalsi with slight opposition, the enemy retiring up to Baraut. The Nepalese fort of Kalunga, which guarded the chief route at that time from Dehra to Tehri, stood on the low-lying hill overlooking Nalapani and the Song Valley, 3 miles east of Dehra, and consisted of a stone fort of irregular pentagon in shape crowning the highest point of the hill, a large stockade at the north end of the high ridge overlooking the village of Lakhaund, while another line of stockades covered the east side of the high ground towards the village of Kalunga, now non-existent, this side being less steep and more easy to attack by.\* On a detached knoll south of Kalunga village, the Nepalese had a small stockade. The walls of the main fort were of no great height, and were at this time in an unfinished state, and the entrance was through a wicket gate on the north-east side. Intent on immediate success, Gillespie at once set about arranging for the attack. He divided his troops into four columns and the Reserve (noted below†). Some of his orders for attack and assault are worthy of attention and were briefly:—

“Officers are enjoined to order their men to reserve their fire. Not a shot to be fired at random.

Necessity of cool and deliberate aim.

Advantage of a determined use of the bayonet.

Officers at heads of columns to move deliberately, so as to avoid men lengthening out and straggling, and recommending officers to bring their men to the storm in possession of all their physical powers.

Strict silence. Orders to be carefully and quietly passed from front to rear by the men.

When the head of a column debouches towards the point of attack a short halt to be made to get the men into compact order.

No halting to fire or reload once the assault has started.

Officers commanding the separate columns to bear in mind the necessity of timing their march so as to render the attacks simultaneous.

Emulation to actuate all, but corrected by steadiness and coolness. No breaking of rank or racing for the foremost place. Each column to be a mutual support to the other.”

A reference is made to the activity, bravery, and dexterity of the enemy and then the orders followed for Officers Commanding columns to move to their posts.

\* Estimated strength of Nepalese, 700. Another account says from 400 to 500.

† *Attacking Columns*—1. Colonel Carpenter, H.M.'s 53rd foot—4 Cos. 17th N. I. 4 Cos. 6th N. I., 4 Cos. 7th N. I., Pioneers with ladders, Det. Golaunday, and Lascars.

2. Captain East—3 Cos. 17th N. I., 1 L. Coy., 27th N. I., 16th Pioneers, Det. Golaunday, and Lascars.

3. Major Kelly—3 Cos. 7th N. I. 2 Cos. 1st and 5th N. I., 20th Pioneers.

4. Captain Campbell—2 Gren. Cos. 6th N. I., 1 L. Coy. 16th N. I.

*Reserve Column*.—Major Ludlow, 8th N. I.—4 Cos. 6th N. I., 1 L. Coy. 26th N. I., Det. 9th N. I., 2 Squad. 8th R. I., Dragoons, Skinner's Horse.

At 3-30 P.M. on the 30th Colonel Carpenter's column, supported by the Reserve under Major Ludlow, were to advance and occupy the tableland due south of the fort; with them went General Gillespie.

Captain Fast's and Major Kelly's columns were to march at 2 A.M. on the 31st October, the latter making a long detour to place himself in advance of the village of Kursalli, the former to move on Lakhaund.

Captain Campbell's columns at the same hour to move on the village of Asthal, east of Kalunga.

The assault was ordered for 9 A.M. on the 31st and the signal for it was to be the discharge of 5 guns, each preceded by a silence of as many minutes on the part of the battery on the hill, which fire was to be repeated by a field piece left in camp. These were to be fired two hours before the actual assault, to enable the different columns to correct their distances from the place, as it was doubtful if the guides could be depended on.

During the night 30th and 31st, batteries for two 12-pounders, two mortars, and two howitzers were erected under direction of Major Pennington, C.R.A., and Lieutenant Blair, R.E., assisted by the Pioneers and Captain Byers, A.-D.-C. to the General Officer Commanding. Guns, mortars, and howitzers were brought up the hill by elephants, placed in the batteries, and at daybreak a well directed fire was opened on the fort and the detached post, which was briskly returned.

Early in the night Gillespie had sent a summons to surrender to the Nepalese Commander, Balbadr Sing, who, however, returned the letter with a message stating it was not his habit to receive letters at such unreasonable hours and that he and Gillespie would soon meet.

At 7 A.M. the signal guns were fired, it being deemed that in two more hours of bombardment it would be feasible to make the simultaneous assaults.

About 8-30 A.M. the Nepalese on the detached hill sallied out in strength to attack our right, they were checked by the fire of two howitzers, finally driven back with the bayonet, and the hill taken, the Nepalese retiring on the fort. The signal guns having been fired, and it being then nearly 9 o'clock, in the hope of being able to pursue these into their main works, the General ordered forward Colonel Carpenter's column, with Major Ludlow in support covered by the fire of the batteries. They pursued the Nepalese up the hill till confronted by a long stockade which was taken with some difficulty and loss, and the enemy driven through a small hamlet to the north-west face of the fort, where the wicket gate was. In this hamlet our troops collected and imagining Major Kelly's and Captain Fast's columns to be close at hand, the assault took place. But the best laid plans do not always come off, for both columns having lost their way in the night were still too far off to be of any use, and moreover had not made out the signal guns.

The first assault was repulsed and the troops retreated to the stockade which they held until reinforcements came up. These, with the 53rd Foot and field guns, moved forward again to assault, but were repulsed a second time by a sweeping fire of grape, matchlocks, and arrows.\* This repulse produced a depressing effect on the troops, and a disinclination to face it all again being noticeable, the General brought up the rest of the 53rd and the 8th Dragoons dismounted, and after informing all of the urgency of success he sent forward the third assault, under cover of two field guns, which were pushed almost to within 25 paces of the walls. Gillespie himself led a dismounted squadron of his beloved Irish

**British losses.**  
**General Gillespie.**  
**4 B. O.'s killed.**  
**15 B. O.'s wounded.**  
**27 B. & F. killed.**  
**213 B. & F. wounded.**

Dragoons, with whom he had served for many years, and who were devoted to him, straight at the wicket gate, where he fell, shot through the heart within a few feet of the walls, his second A.-D.-C., O'Hara, being also killed. This assault was likewise beaten off. Captain Campbell's column arrived from Asthal at the close of the action and in time to cover the retreat of the beaten and dispirited troops. The escalading ladders had been left behind and taken by the Nepalese after the second assault, otherwise it is possible this last assault might have been successful. Afterwards it was learnt that the enemy, seeing our troops get so close to the walls, thought the day lost for them, and were ready to abandon the fort.

There are several accounts of this assault, one of which states the 53rd Foot were disinclined to go forward, and Gillespie, to set them an example, called up his favourite Dragoons and led them to the front. In his life this episode is not mentioned, but in the Regimental Records of the 53rd, a note at the end says: "The tradition is that the men were discontented, and while holding their ground, refused to advance; also that these failures were the cause of much bitter feeling between the officers of both Battalions, which led to many serious duels."

The assaults were unsuccessful, first, through the accidental failure of the two columns to the north to co-operate, and secondly through the pursuit of the enemy up to the fort, which led to the hurried intention of assaulting before the batteries had properly done their work and made an effective breach.† The next senior officer, Colonel Mawby, drew off the whole of the troops, returned to camp, and awaited a siege battery from Meerut.

This was our first stiff fight with the Nepalese, who here showed their grit, and not only the men, but their women too, for there were numbers of the latter in the fort, and these, true to the best traditions of their sex, helped their men nobly, for they were seen

\* Lt. Ellis, Pioneers, killed while planting one of the ladders against the wall.

† One report states that a reason why the breach was not properly faced was that it was found, although the depth inside was not great, the ground below was covered with sharp stakes impaling any who jumped down.

at the assaults on the walls showering heavy stones on our men. Here, too, occurred an interesting incident. During the fire of the Batteries early in the day, one of the enemy was seen coming from the fort holding up a white cloth; when he came up to the battery it was seen he had been badly hit in the lower part of his face by a piece of a shell, and the wound was dreadful. Being in extreme pain, and somehow having heard of our medical treatment, he came to us for relief, and of course was sent to hospital, and the guns which for a space had ceased to fire, re-opened again. He was sufficiently cured to be able to leave hospital before the final attack, a month later, and when asked where he was going to, replied happily, "I'm now going back to fight you again, what else?"

The account of this action in the 53rd Records is as follows:—

"October 14th, 1814.—The 53rd Foot marched from Meerut. Two companies under Lieutenant Young were detached to reconnoitre the Timli Pass, while the remainder under Colonel Mawby passed through the Mohand Pass, and reconnoitred Derha and Kalunga. Slight effort made against the fort failed, as he had no cannon. Gillespie arrived from the Western Doon, and after his force had collected, an advance against the fort was made with such light guns as he had. Various unfavourable circumstances arose, which caused the first assault to fail, in which the Pioneers, with their ladders, fell, and were destroyed by the burning of a small hamlet under the fort walls. Several men were killed, and many wounded, including Lieutenants Young and Aynsty, severely wounded. Three of the columns, not having heard the signal, failed to arrive in time to co-operative. The column which assaulted first now withdrew to Kalunga village. Reinforced by three companies, 53rd, under Captain Coultman, and a battery Bengal R.H.A. under Captain Kennedy, another attempt to take the place was made. A party of the 53rd dragged two of the guns with ropes up a steep slope under a sharp fire, and after overcoming the difficulty of a small stockade across the path, they got into a position to batter the gate and opened fire, the stormers forming up behind, waiting for the gate to be forced open, and a passage made. A destructive fire was opened from the walls on this closed mass of stormers, who suffered considerably. General Gillespie now placed himself at the head of the troops and while leading the assault fell mortally wounded. The attack failed, and the troops withdrew from the fort to await the siege train from Meerut. The 53rd casualty list this time was 16 killed and 75 wounded. The siege train eventually arrived on 27th November, and the place was again attacked, the stormers being the flank companies 53rd, and two native Grenadier Companies under Major Ingleby. The breach was defended with desperate resolution; Major Ingleby was wounded, Lieutenant Harrington and a few of the 53rd ascended the breach, but were instantly killed, and this assault failed through the stormers being in insufficient strength. The same day the remaining companies 53rd Foot were brought up with some native companies, and another assault made, but the



people. The cases of poisoned wells or arrows, or cruelty to wounded, is only recorded in one or two cases; no rancorous spirit of revenge appeared to animate them, they fought in fair conflict like men, and abstained from insulting the bodies of dead or wounded. In no case was there any interference with the dismal duty of collecting the casualties at the close of an action.

It is curious to note that this war, which lasted in its first phase from October 1814 to May 1815, and in its second phase from January 1816 to May that year, was full of hard fighting, losses, and hard work produced no medals,\* nor is it inscribed on the war honours of the numbers of regiments, English and Native, who took part in it. How different to the lavish distribution of such in our day.

I have frequently heard it supposed that the so-called "Gillespie Tombs" cover the remains of the General. This, however, is not so—his body, placed in spirits, was taken to Meerut and buried there. The monuments are set up on the camp ground occupied by his force; very likely some of the officers and men may have been brought off the fateful hill and buried there. Twenty-two years ago, when the late Major Bradley, 2nd Goorkhas, and myself were shooting, we came on an exactly similar monument to those now on Gillespie's camp, standing in jungle, somewhat broken, and with the inscription stone chipped out. The natives of a neighbouring hamlet then told us they had always known it as 'Kisse Colonel Suhib ka kabar,' and it struck us that in all probability this had been put up on the spot where Balbadr Sing and his remnant cut their way out through our cordon and where no doubt a sharp fight occurred. But there exists now no record to show that our suppositions were correct.

The site of the fort is now covered with thick jungle, and it is somewhat difficult to make out the lines of the walls. The road up to it from Nalapani and Lakhaund villages can be easily traced, as also an outwork on a spur below the main fort facing west, together with the walls which enclose the water-supply in the grassy hollow at the top of the Nalapani ravine. In the early years after the war the first Superintendent of the Doon, the Hon. F. Shore, and his great friend, Captain Young, who raised the Sirmoor Battalion, built a house on the top of the ridge where the Nalapani and Bijhet path forces, in which they lived some time, but all traces of this have disappeared except the water-cut which they made to irrigate their garden from the old Nepalese water-tanks. The fort at Kalunga was never of the solid masonry nature as at Ramgarh or Malaun, but was rather more like a glorified "sangan."

The forts on Ochterlony's line of operations have, unlike Kalunga, been left standing and they were stone structures with bastions, and of a somewhat mediæval appearance.

In the summer of 1907 I was out in the hills some 26 miles north of Kasauli and camped on the maidan in the Nehor Valley, whereon stands a dilapidated monument to Williams and others

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\* One I believe was struck years after when but few were alive to wear it.

fight ensued, in which our men were driven back on those still ascending, confusion set in, and the retreat became a hopeless rout.\* At several points efforts were made to rally the men, but as often the Goorkhas getting home again, they broke and fled.

At the same time the other column was ambuscaded on its climb, and practically surrounded by Nepalese using the kookerie with deadly effect; and after offering an ineffectual resistance for a short while, retired in the greatest disorder, followed by the Nepalese, who continued their pursuit of both columns, strewing the ground with bodies of dead and dying up to the piquets of General Martindell's camp. It is said in this action the Nepalese never fired, but simply used their kookeries.† General Martindell's force remained more or less inactive‡ during January and February, trying the effect of a badly arranged blockade. No further real effort against Jaithuck was made, which place was only formally surrendered after Amer Sing's capitulation at Malaun, April 16th, 1815.

Although the operations of the two Eastern Divisions do not come into this account it may be as well to state, as showing how gloomily the whole campaign opened for the English, that the armies of General Marley from Dinapore, and that of General Wood from Benares, also suffered severely in their opening operations; where at Pursa and Samanpur respectively the advanced troops of 500 and 300 odd, not being properly supported, were overpowered and almost entirely cut up. At the latter place a light company of the 17th Foot covered itself with glory in the gallant stand they made, nearly the whole of the company, and their Captain Poyntz, being either killed or wounded. In fact these two armies, badly handled, were unable to render any active service the rest of this cold weather; though of course their presence in the field caused a diversion in favour of our two western forces. The general outlook was of the worst, and our good fortune only began to re-appear in March and April, 1815, with the achievement of what the Commander-in-Chief in India styled "the rapid and glorious conquest of Kumaon by Colonel Nicholls," with whom were Captains Gardner and Hearsay, intrepid soldiers of fortune of those days.

Lord Hastings delivered himself of some trenchant criticisms on the failures of the various Divisions, notably on that of Kalunga, "a place of no great strength or extent, incomplete when we first attacked, without a ditch and defended only by a small garrison whose only real means of resistance lay in their own bravery."

Unlike other Asiatic enemies, the Nepalese showed a remarkable spirit of courtesy towards us, worthy of a more enlightened

\* Lieut. Thackeray, 2nd N. I., with a company covered the rout as well as could be done in the failing light until he and Ensign Wilson, with numbers of men were slain.

† Casualties at Jaithuck, 29th December 1814—4 B. O.'s killed, 5 B. O.'s wounded, 79 R. and F. killed, 281 R. and F. wounded.

Casualties of the 53rd at Jaithuck—9 men killed, Lieut. Brodie and 30 men wounded.

‡ 1,000 Europeans and 5,000 sepoy with artillery held at bay by 2,300 Nepalese.

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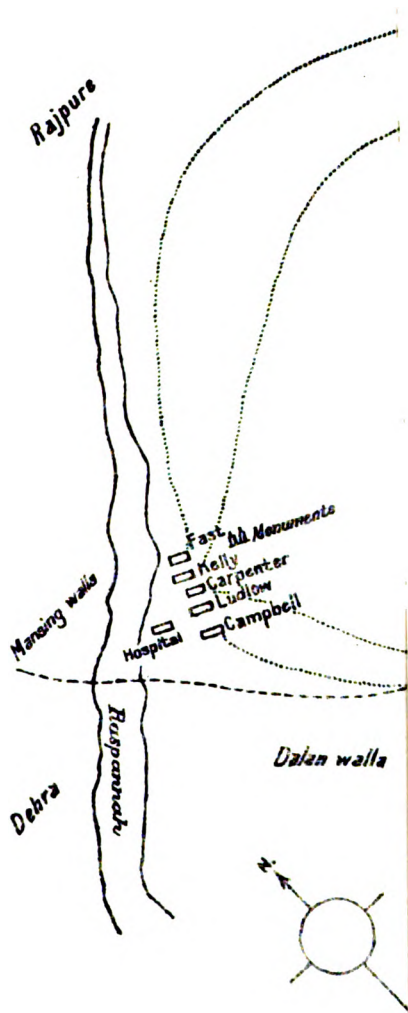
\* One I believe was struck years after when but few were alive to wear it.

killed before Ramgarh, watched over by the solid, sombre old fort, on an inaccessible looking ridge 2,000 feet above. I climbed up to it by the fairly well-graded road made and paved by the Nepalese, was shown over the place by the aged Killadar, whose father had been in it at the time of the war, and who also showed me the points up to which Captain Lawtie managed to drag and place his batteries. On two of the bastions are still seen piles of stones, now grass covered, placed there to be rolled on to our assaulting columns. In many places in the Nehor Valley one can still see traces of the roadway cut and blasted out to enable Ochterlony's heavy guns to be brought along by, and the same can be traced in the vicinity of Jaithuck, giving evidence of the immensity of labour requisite in the conduct of this, our first hill war.

I have often been asked if I knew at all of what classes the Nepalese forces consisted who fought us so well in this war, and I had never come across any allusion to these in any record or memoir until in the India Office library I found amongst others the copy of a letter intercepted by the English before Malaun written by Amer Sing Thapa to his Government, urging them to further resistance and belittling the capabilities of the English forces, in proof of which he says: ".....did not the companies of the Gorakhnath and Barak Regiments hold at bay for a month many thousand English at Kalunga, etc., etc." Now, the Gorakhnath is still, as then, composed of Magars, while the Barak Pultan has always been formed of all classes intermixed. From this we may perhaps rightly surmise that the Nepalese troops opposed to Gillespie and Ochterlony were of the pick of their service and composed to a great extent of the classes we value so much nowadays.

It is also worthy of note that Amer Sing's policy of keeping out the English at all costs from Nepal, so gravely impressed by him on the Durbar then, is still kept up; and who shall say he was not wise?







## TRAINING FOR FRONTIER WARFARE.

**A lecture delivered by Lieut.-Colonel W. E. Venour, 58th Rifles (F.F.) at Simla, on the 13th August 1913.**

**MAJOR-GENERAL BUNBURY.**—Ladies and Gentlemen,—It is my pleasant duty to introduce to you Colonel Venour who has come all the way from Quetta to remind us that there is such a thing as frontier warfare. There are amongst you a good many who have seen frontier service and, I hope, the fact that Colonel Venour belongs to a regiment of the Frontier Force and may be considered an expert in frontier warfare will not deter anyone from coming forward after the lecture to discuss any point of interest. Such discussion has, I think, unquestionable advantages.

**COLONEL VENOUR.**—The subject of this lecture is "Training for N. W. Frontier Warfare," or "Mountain Warfare" as it is called in the latest drill books. The fundamental principles of war of course apply to this just as much as to any other form of warfare, but the application of these principles to fighting against a Pathan enemy in a very difficult terrain, presents some special characters and the importance to troops in India, both British and Native, of a thorough and universal training in this very specialised form of fighting is evident when we call to mind how much of the fighting that has fallen to the lot of the army in India since Mutiny days has been among the Frontier Hills and Passes. The North-West Frontier of India furnishes examples of almost every kind of hill, and in parts there is quite thick jungle, and certainly it is here that the most difficult conditions are met with. The lack of a more generally diffused knowledge and practice of the principles and methods suitable to frontier warfare was the direct cause of most of the mishaps and regrettable incidents that occurred during the Pathan risings in 1897. This led to quite a boom in training for this kind of fighting, and we reaped the advantage of this in the last expedition; and now Mahsuds, Afridis and Mohmands all admit freely our increased efficiency in this respect.

2. Since 1908 there have been no expeditions on the Pathan border and it seems that interest in this particular form of training has somewhat waned throughout the army as a whole. In the future, as in the past, this is the most likely form of fighting in which Indian troops may have to take part, and as long as they serve in India the same thing applies to British troops; and though they may have to campaign in Europe or any part of our Empire, still a knowledge of frontier warfare is a useful fighting asset to any unit under any conditions, teaching as it does initiative and self-reliance.



3. Field Service Regulations, 1912, contain 6 paras. of instruction on this subject, drawn up by an expert committee which are excellent, very thorough, and just what is wanted in a book of this sort which is meant for the use of all our various forces ; but these excellent instructions are necessarily so condensed that in practice there is room for much diversity of method in carrying out the principles laid down for our guidance. This diversity of method is so great that no two brigades carry out the details in the same way, and whenever a battalion moves in relief it has to learn new methods. It may be urged that there is no harm in this and no need for uniformity of method in details so long as no main principles are violated ; that is true enough of civilised warfare but not of this very specialised warfare, in which absolute uniformity of detail is required. What would be counted as small and negligible successes and disasters in civilised warfare would bulk large in the tribesmen's estimation, and would have a correspondingly great effect on the campaign. For example, if a single piquet of ten or twelve men makes a mistake and withdraws too soon or not soon enough it may lead to a bad mishap, to the rear guard or to itself. This is seen constantly at training and manœuvres and has happened on service, and such a success gained by one tribe might easily cause another tribe that was "sitting on the fence" to declare against us. Yet such a mistake made by the N. C. O. in command of a piquet might well be due to differences of detail in the manner of withdrawing piquets as taught in his regiment, and in that of the rear guard commander. For instance, one C. O. objects to the use by the rear guard of the red flag recommended in F. S. R., para. 144—6, as being likely to give away his Rear Guard ; another C. O. insists that no piquet shall withdraw till it gets the signal to retire from the Rear Guard, and he trains his battalion accordingly, quoting F. S. R., paras. 144—6, as his authority ; while a third C. O. considers that the N. C. O. in command of the piquet should decide for himself when to retire on to the Red Flag carried by the Rear Guard, also quoting paras. 144—6, F. S. R., as his authority. It would not be hard to give a long list of the divergence of views held and acted on by units, and Brigades, in such like details, any of which detail if not understood by all units in a mixed brigade on field service across the frontier might lead to disaster. The object of this lecture is to discuss some of the different views that are held on this subject and which are not legislated for in F. S. R., 1912.

4. The chief differences in methods seem to occur in the important work of piqueting the road by the advanced guard and of withdrawing the piquets by the rear guard. It is clearly laid down in F. S. R. that road piquets are normally furnished by the advanced Guard, but further on in the same paragraph the employment of special troops other than those of the advanced guard is suggested if it is likely that much piqueting will be required, and this method is usually adopted in paper schemes and often at training camps.

By following this course a case of more or less dual responsibility appears to arise and the way is thus opened to quite unnecessary friction and delay, and we have two men doing one man's job. The C. O. of the piqueting troops has to take his orders from the A. G. commander as to placing his piquets, and this causes delay; if a piquet finds its proposed piquet position is held by the enemy and has to fight for it, then the question arises is the A. G. to support it or are the piqueting troops to do so? and meanwhile, is the vanguard to push on or wait till that little fight is settled? These are points which occur frequently at training and manœuvres, and when tempers are short they lead to delay and friction, and will do so on service too. Without departing from either the letter or the spirit of F. S. R., it is possible to get round this difficulty by not using the words "piqueting troops" in orders or schemes, and by simply increasing the A. G. to the strength thought necessary for its duties of clearing the way and piqueting the road. It is well within one man's capacity to command the A. G. in its dual rôle, if he knows his work, for if there is strong opposition to the A. G. then piqueting stops automatically and an action has to be fought before the column can proceed; if there is no very strong opposition then the vanguard brushes it aside and the piqueting of the road can go on without hindrance.

5. The use of piqueting slips or "chits" for piquets, giving the strength, corps, and name of commander of each piquet is fairly common but by no means universal. This system was used by such past masters in the art as Lumsden, Vaughan, and McQueen, and is mentioned in Lumsden's notes written in 1860. It seems to have fallen into abeyance and was not used during the 1897 expeditions but was revived and used with good results during the Mahsud blockade operations in 1901. It has this great advantage that the piquets are numbered consecutively which is useful to both the A. G. and R. G. commanders. If a form is used like a cheque book of which the counterfoils are retained by the A. G. commander who puts out the piquets, while two cheques, or slips, are given to the piquet commander—one for himself and one for the connecting file from his piquet to hand to the R. G. commander when he comes up—it simplifies matters and helps to ensure that no piquet is overlooked by the R. G. commander who is responsible for the safe withdrawal of all piquets. In some regiments extra copies of these slips are sent back to both the R. G. commander and the column commander which seems unnecessary. F. S. R. 1912, only recommends the use of connecting files when the piquet is out of sight of its supports or main column. It appears however advisable for each piquet to have its connecting file on or near the road, regardless of the visibility of the piquet, so that the R. G. commander can be shown where each piquet is. The men of this connecting file should fix bayonets as this gives them confidence and shows who they are at once. It is sometimes possible and advisable to use one pair of men as connecting file for two piquets; in this case

the two piqueting slips should not be given to the same man but one to each. These connecting files are often called "bayonet sentries," and the system is well known in theory though not invariably practised, but there is considerable divergence of views as to the proper place to post this connecting file or bayonet sentry. Some corps place the bayonet sentry near where the piquet should come down and rejoin the R. G., and others place him further back, near the point from which the piquet left the road. The latter seems the better method, as he will the sooner get into touch with the R. G. hand in his slip, and be able to point out the position of his piquet, also its strength and the route by which it will probably rejoin the R. G., for it is advisable that the bayonet sentry should go up in the first instance with his piquet to its position and make sure of where it is placed, which he cannot make certain of doing if left on the road when his piquet goes up.

6. The employment of a distinguishing flag carried with the main guard of the R. G. is suggested in F. S. R., paras. 144—6, but this is by no means always done, and some C. O.'s have a strong objection to the use of it. It is not necessary for this flag to be very cumbersome nor need it be displayed all the time, and on the whole the arguments in favour of its use seem stronger than those against it. One point to be remembered is that each unit should not have its own flag, there should be only one such flag for each column or brigade, and this should be kept by the Brigade Major and be handed over to the R. G. commander each morning. If each unit has its own flag some intelligent subordinate is quite certain to show it at the wrong time and thus bring down a piquet prematurely. This has happened on manœuvres, and also on service.

7. As to withdrawing road piquets. Some officers maintain that all N.-C. O.'s should be so well trained that they can be trusted to judge exactly when to commence the retirement of their piquet, and to be able to time their movements by those of the rear guard, and a good many regiments are trained on these lines. This calls for a high degree of tactical ability on the part of N.C.O.'s and seems rather a counsel of perfection. Doubtless there are many experienced N.-C. O.'s, quite capable of doing this successfully, but it seems unlikely that every N.-C.O., all through a regiment will be so reliable, and if there are casualties this responsibility may fall on a quite junior and inexperienced N.-C. O. Moreover it is laid down very clearly in F.S. Regulations, 1912, that the rear guard commander is responsible for withdrawing the piquets, but it would be hard to enforce such responsibility if every piquet commander withdraws when he thinks fit, or as soon as he sees the rear guard flag. The piquet commander up on the hill top is apt to appreciate the situation from his own point of view rather than from that of the rear guard commander, who is carrying on the rear guard action as a whole, and with the best intentions he may, by a premature withdrawal of his piquet, cause many casualties among the rear guard. The soundest course appears to be that each piquet should

hold on to its position at all costs until it gets a signal from the rear guard to withdraw. This signal should not be looked on as a direct order to retire at once but as an instruction that "Now I am ready, come down as soon as you are able, I do not require you any longer up there."

8. The method of conveying such an order is worth considering. If "C. I." is semaphored to a piquet furnished by a British regiment they will probably take it and come in quickly, but the same thing might be quite unintelligible to a piquet from an Indian regiment in which signallers are not so plentiful. It must be remembered that the rear guard and the piquets are supplied generally by different units, and in a mixed brigade there will be several languages in use, and very few officers or men will be able to talk all these languages, and communication by signal or semaphore in a little known tongue is not easy. This is a very real difficulty, and though Hindustani is of course the *lingua franca* of the Indian Army and is very useful, still it varies greatly according to the part of India from which regiments are recruited, and this is very noticeable in the case of class regiments. What is wanted in our polyglot army is some signal that everybody knows, and a simple solution seems to be to signal the number of the piquet with the rear guard flag using the method employed at musketry. The sender faces towards the piquet and "Calls up" with the rear guard flag, and then sends the number of the piquet giving tens to his own right and units to his own left, and then the field signal for retire. The signal must be given deliberately and not hurriedly or the wrong piquet may take the signal as meant for it. The piquet commander, for whom the signal is meant, must acknowledge receipt of the signal in such a way that the sender can see his acknowledgment.

It is laid down in F. S. R., 1912, that supports should be left at suitable points to cover and regulate the withdrawal of piquets, but if piquets are carefully posted they can very often mutually support each other both when taking up their positions and when leaving them; and the rear guard can well supply these supports when the withdrawal takes place; it seems therefore to be a waste of force to leave supports from the A. G., or piqueting troops, who probably will not be needed till the piquets withdraw some hours later. The last few files of his command should be kept in hand by the Officer Commanding the Company or Double Company for purposes of personal escort, and should not be expended on piqueting; they could be used if needed as supports. He or one of his officers should visit as many of his piquets as possible and eventually assist the R. G. commander in withdrawing the piquets. It is advisable for the Officer Commanding the Company or Double Company to keep a record in his note-book showing the serial number of each piquet he has furnished, which flank it is on, strength, commander, and a note of the route by which it will rejoin the rear guard, or any other information that may be useful to himself or the rear guard commander.

Similarly the rear guard commander should keep a record in his note-book of what piquets have been withdrawn. It is best to rule columns for this purpose to show—

- (1) the number of the piquet ;
- (2) whether the bayonet sentry has reported to the rear guard.
- (3) the hour at which the piquet was signalled to rejoin ;
- (4) if the piquet has reported all correct to the rear guard ; commander.

Some such system considerably simplifies the withdrawal of piquets, it is useful in case the rear guard commander is wounded and another officer has to carry on, and it has been found quite feasible and practical. The plan is sometimes adopted of sending back to the rear guard commander, a series of sketches showing the positions and numbers of piquets. This is necessary no doubt for Staff Rides when there are no men in the piquet and no bayonet sentries to show where the piquets are, but it is by no means every officer who can make a really good sketch, and the system hardly seems practical under service conditions, nor does it appear to be necessary so long as the bayonet sentries have their "chits" and the double company commander has a record also in his note-book of all his piquets, which he can show, or send, to the rear guard commander.

10. When detailing piquets it is advisable always to mention the exact number of rifles that are required and not to detail half companies, sections or squads owing to the varying strength of companies as a campaign proceeds. It is sometimes necessary to leave a piquet to watch some side nullah in which the enemy may collect to rush the transport. This is often the most difficult sort of piquet to place satisfactorily, for it should be able to watch the nullah and yet not be commanded itself at short range. One good way is to place a small piquet to watch the nullah and another to deny to the enemy any higher ground immediately commanding this lower piquet.

One of the most important duties of a piquet commander on arrival in his piquet position is to determine the best method of withdrawal, sending ground scouts to reconnoitre and mark the route if necessary. A road piquet is usually safer, and tactically stronger, if the men are scattered in groups of three to six among natural cover and within easy hail of O. C. piquet than if they are all crowded in one sangar. A badly built sangar is useless and a good one takes a long time to make, and any sangar always draws fire, is hard to leave without being seen, and usually has restricted field of fire, whereas well placed scattered groups of men see into dead ground, watch all lines of approach, are not themselves seen and consequently are not fired at, and can get away easily without being seen when the time comes to retire. Night piquets round a camp are quite a different proposition and should be as strongly entrenched as possible.

11. As to these night piquets. In tactical exercises and paper schemes it is not unusual to see small piquets of 10 or 12 men put out, which is a dangerous practice in most cases. On one or two

occasions in the Mohmand Expedition and again the other day at Spinwam in the Tochi, piquets were heavily attacked at night and would have been captured if they had not been reinforced. Owing to the improved armament of the tribes expert opinion seems to be agreed that in future expeditions we must expect serious night attacks on piquets more than attacks on camps, though the latter will be sniped of course. The remedy is strong piquets of 30 to 60 men in well built and carefully sited sangars with abattis, trip wires, and perhaps hand grenades as adjuncts. The men of a large piquet in a strong well built sangar are just as safe, and no more uncomfortable, than if they were in camp the camp while is certainly safer for their presence on piquet.

12. It is now distinctly laid down in Field Service Regulations that each unit is to furnish the necessary piquets for its own front, this has been the custom for some time, though the alternative system of each unit in turn taking all the piquets has its advocates. It tends to simplify arrangements in an Indian regiment if each double company in turn finds all the piquets that its unit has to furnish. For by so doing all details as to cooked food, ammunition, water, blankets, and fatigue parties to help build sangars are arranged almost automatically, and the Double Company Commander or his subaltern can see personally to the siting of each sangar, which is a most important point. The men of the double company not on piquet should be utilised as the Battalion Reserve and should be camped in the centre so that they do not have any of the perimeter defences to construct. One company is hardly sufficient for the piquets, but two are enough for piquets and Battalion Reserve at a rule. Probably a similar system would work well in British regiments.

13. The question of the perimeter defences is an important one. There seems no sufficiently good reason why cavalry, artillery and sappers should not hold a portion of the perimeter, and F. S. Regulations, 1912, mention specifically the occasional use of guns on the perimeter, though it does not refer to the use of cavalry or sappers in this way. The infantry are the hardest worked on the whole, and in a normal camp each battalion might have from 250 to 400 yards of perimeter to build and hold, so even a few yards of wall taken by the cavalry, artillery or sappers is of great help, but the portion of perimeter allotted to the cavalry should not exceed what can be adequately guarded by a quarter of their strength, with a quarter in support and half with syces holding the horses. Great differences of opinion are held on the question as to whether a ditch outside or a trench inside the perimeter wall is preferable. Now while it is quite certain that camps will be sniped, and even heavily fired into at short range it is not at all certain that they will be charged into by Ghazis sword in hand, since tribal tactics all over the frontier are changing so rapidly with the better armament of the clans. The chances are that a well built perimeter camp will not be rushed; so the soundest plan appears

to be to have a broad trench, say seven feet broad and one foot deep, in which men can sleep, say immediately behind the perimeter wall, and a ditch in front if there is time to make it or more material is required for the wall. Three sections from each company holding the perimeter should be in these trenches in groups under a N.-C. O., with a traverse between each group for extra security and loop-holes just clear of the ground level to counteract the tendency to fire high at night, while the fourth section is in reserve behind its own company, also dug in. By this means men are well protected from snipers and get a sound night's rest, and are saved the extra work of digging out sleeping places for themselves inside the camp, while if the camp should be attacked they are well placed to defend the perimeter. A point that is often overlooked is to provide some form of bullet-proof shelter in which the medical officers can have a light burning while treating the wounded: a small enclosure of *boosa* bales with a tarpaulin roof to prevent the light showing is useful. Followers also are sometimes overlooked; they should have their alarm post the same as everyone else, and if a small guard is provided for them it gives confidence and ensures order and quiet. Of course the Transport, Hospitals and non-combatants generally are placed in the centre of the camp, but occasionally some peculiar formation of the ground will admit of the animals being outside the camp, though well within the line of piquets, and under their own guard of course.

14. In frontier warfare reconnaissances, the general work of the advanced and rear guards, the attack on a position, and the infrequent defence of a position are all governed by the rules which are universally applicable to warfare. These rules certainly are modified somewhat by the armament of the enemy and the nature of the terrain, which usually admits of very close support of firing lines and simplifies the use of covering fire, but they do not differ in essentials and call for no comment.

It is in the system of road piquets instead of flank guards, and self-contained piquets round the camp at night in place of an outpost line, and in the details of a perimeter camp that the chief differences occur between ordinary and frontier warfare. And it is in these particulars that much diversity of method obtains throughout the army, and by this means we seem to handicap ourselves quite unnecessarily. It is difficult to determine which is absolutely the best way to carry out these details and there is much room for difference of opinion, but what we want is a sound and universal method which will be strictly adhered to by all.

15. It seems hardly necessary to enlarge on the advantages that will accrue in future expeditions if all units are trained in peace to work on exactly the same lines.

If it is admitted that this uniformity of detail is desirable then the best solution appears to be for the General Staff, or a specially selected committee, to draw up detailed instructions, in fact a sort of Indian Supplement to Field Service Regulations, on this peculiarly

Indian subject. Then in order to disseminate this teaching quickly throughout the army, and as a pound of practice is worth more than a ton of theory, one or two classes might be assembled on the lines of the mounted infantry schools that used to be held at Ambala and Poona. This would entail very little expense, no recurring or even initial charges would have to be met beyond the wear and tear of Government tents and rail fares of the officers and N.-C.O.'s attending and those instructing the classes. The course need not last more than a month and could be held at a season that would not interfere with Battalion and Brigade Training or Manœuvres. These classes might be of the nature of a temporary training battalion, each section of 25 being made up of officers and N. C.O.'s from the same regiment, and this very soon would ensure that all units were trained on exactly the same lines, which is not at present the case.

If this is thought to entail too great expense, then the classes might be on a more modest scale composed of senior officers only, somewhat on the lines of the present refresher courses of musketry for senior regimental officers and staff officers.

As at polo or hockey a well trained team in which each man knows and keeps his place will beat a scratch team of better players who play an individual game, so it is in frontier warfare. Individually most Pathans are far better at the game than we are, but they lack combination, and by playing a good combined game our teams can make sure of beating them every time. It is systematised training in team play that I advocate strongly.

The Chairman called upon any member of the audience to ask any question or raise any point that he thought would be of interest.

SIR P. LAKE.—There is one point in this lecture which I regard with a great deal of interest. The lecturer has quite rightly argued that our chief interest in India is in connection with the North-West Frontier; he has also rightly argued that those who may be expected to fight there should be trained on the same lines as far as possible. It seems to me that we must somewhat guard against going too much into detail. The Field Service Regulations lays down principles which are as far as possible applicable all over the world; but I think we, Britishers, may claim that our army has fought impartially all over the world. At the same time if you once proceed to say that for a particular army a particular kind of training is by far the most essential you are a little apt to go too far. I merely utter that as a note of warning. The question which has been dealt with is almost more it seems to me a question of machinery than of principle. Well, I think the procedure that the lecturer has advanced has been exceedingly sound and yet I do think that to a certain extent there is room for variation.

Though it is quite possible that at any moment we might have fighting on the N.-W. Frontier, I believe it is only a fact to say that that in 1897 the people of Swat did not know in the morning that they were going to rise in the afternoon; which I think is a good



instance to show how unexpectedly events happen there. The recent war in the Balkans has made it evident that at any moment India might have been called upon to take her share as a part of the British Empire. She might have been called upon to hold Egypt or something of that sort. Therefore, we must, I think, train our troops in India not only for war on the N.-W. Frontier but for warfare in other countries. We have had telegrams to-day that in Somaliland a force of the Camel Corps has been cut up and we also hear that a force of two double companies has been sent out from Aden to hold a position. All this shows that there may be other kinds of country to fight in besides the N.-W. Frontier. Quite recently we have had expeditions in Abor land and in the Naga Hills where an entirely different kind of warfare has been practised.

If we were to try to issue detailed instructions for every kind of warfare we should probably get our training books of a voluminousness which would certainly discourage many people from studying them properly. I personally think we should not endeavour to go into too much detail. On what do we base our hopes? What we trust is that what we practise in peace will be of use in warfare. Each regiment will know what it is likely to do and the Commander will know how far and in what manner each regiment under his command will do its duty as he has trained it to do it.

I merely utter that as a note of warning, but at the same time I would say that Colonel Venour's suggestion about a course of special instruction would be likely to prove very valuable. (Cheers.)

MAJOR-GENERAL BUNBURY.—With reference to Sir Percy Lake's interesting remarks, I don't think it is quite fair to Colonel Venour to assume that he meant us to imagine that we were not to study other forms of warfare as well as mountain warfare. I think the feeling in India, among frontier officers in particular, is that of late years there has been a certain amount of neglect or want of interest shown in the study of frontier warfare. Colonel Venour maintains that it is in petty details of frontier warfare that ignorance is shown nowadays. Very few get an opportunity of training among the hills, and it is only those who have had a certain amount of such training who really know how these details should be worked. I think there is a good deal in his suggestion that some further instruction is required; whether a school would be the best system I don't know. It might be possible to do something by a further attachment of officers to regiments which are suitably placed for training in the same way that cavalry and infantry officers are now sent to artillery and *vice versa*. Something might be done by sending officers from, say, Multan and Ferozepore to the Malakand or Kohat or other stations where there are facilities for hill work.

This question may safely be left in the hands of the General Staff; if they think it worth consideration, something will probably be done.

I think it is a matter of regret that the short time at his disposal did not allow Colonel Venour to touch on some of the wider

points of interest in connection with frontier warfare. He did say that the improved armament of the frontier troops would to some extent modify their tactics, but it is for our consideration whether that fact will not also to some extent modify ours. For instance, it would be worth considering whether we might not resort to night operations, in order to reduce our losses by day. This is a question that we might have had discussed. It is a most difficult thing to carry out night operations on the frontier but possibly in some cases it might be found feasible.

Another point which might have formed another subject for interesting discussion would have been the uses and limitations of cavalry on the frontier. I am sure many young cavalry officers would like to have come to the charge on the point.

Then another very important question in connection with our work on the frontier is the inadequacy of our arrangements for the removal of the wounded. It is rather a burning question and anybody who has seen war on the frontier must realise what the suffering of the wounded is when they are put into a dooly or dandy and the creatures we now send up as bearers have to carry them over rough ground. We hope to improve the situation before long.

Now Ladies and Gentlemen, I will ask you to pass a hearty vote of thanks to Colonel Venour for coming so far to give us this interesting lecture. (Cheers.)



## AIRCRAFT.

### Some probable spheres of action in, and possible influences on, Naval and Military Operations.

By MAJOR W. G. P. MURRAY, 21ST PUNJABIS.

(*N.B.*—The original of this essay was written jointly by Captain Slayter, R.N., and Major Murray, while attending the 1912 Autumn Session of the Royal Naval War College, Portsmouth.)

The subject under examination must necessarily be of a speculative nature. The science of Aeronautics is still very much in its infancy, and even those experts, who have had the most to do with flying machines, are unable to forecast with confidence what the future of aircraft will be, or to what uses they will be put in war. It is therefore proposed to avoid, as far as possible, special pleading for or against any particular type of aircraft, Aeroplanes, Hydro-aeroplanes, Airships (whether rigid, semi-rigid, or otherwise).

Each particular design has its own peculiar advantages, and the examination of these various advantages, and how they may be best utilised, primarily brings out the fact that Aviation, as applied to Naval and Military purposes, has come with the force of a revolutionary discovery. It is not only an invention—an improvement in the arms and materials of war—it is a new arm in itself, designated by the French, it is believed, as the "Fourth Arm," and its effect on all other arms promises to be considerable.

Although undoubtedly of great interest, it is not proposed to go into a detailed account of the development of aircraft. A summary of the progress achieved will be sufficient for the purpose of this paper.

*Airships.*—The latest German Naval Zeppelin is expected to fulfil the following requirements:—

- (i) Speed 51 knots an hour.
- (ii) Useful lift about 7 tons.
- (iii) Remain in the air for  $2\frac{1}{2}$  days.
- (iv) Rise to 6,000 feet in 5 minutes.
- (v) Carrying capacity for  $1\frac{1}{2}$  tons of explosives, which can be dropped at about 500 lbs. at a time.
- (vi) Radius of action 1,000 miles (1,500 at reduced speed).
- (vii) Radius of wireless installation, 250 miles.
- (viii) Armament, 5 guns of sizes, one of which is mounted on the top of the airship.

Other types of airships find favour with other nations, but the common desiderata, striven for by all, are speed, lift, and endurance.

*Aeroplanes.*—These machines, which but seven years ago could only be flown for short distances in calm weather, close to the ground and in a straightforward direction, can now take the air on days when the wind velocity runs to over 45 miles an hour. The altitude records have steadily increased (the highest being about 5,000 metres or 15,000 feet), and it is a normal condition of flight to be up between 2,000 and 5,000 feet. Speeds have been attained of 80 to 90 miles an hour and non-stop runs of 200 miles by single pilots (in a machine fitted with dual control of 5 hours) have been achieved. Some patterns now carry guns.

*Hydro-aeroplanes.*—These have evolved from the aeroplane, and much is expected of a weapon so particularly adapted to Naval needs, its properties being, that, in addition to possessing all the qualities of the aeroplane, except speed in which it is slower, it can, in fair weather, rise from or light upon the water, and also be hoisted out from or into a ship. It is anticipated that further experience will evolve some method of carrying out these latter operations in all such weathers as the machine can fly.

From this very brief summary it is evident that aircraft possess factors that must be seriously taken into account when considering the conduct of operations.

In putting forward for consideration the probable spheres of action, it is proposed to deal with these under the broad headings of (a) Offensive, and (b) Defensive action. But, as one of the chief functions of aircraft is reconnaissance, an operation usually calling for the exercise of the "offensive" spirit, it is somewhat difficult to differentiate between offensive and defensive spheres, and to draw parallels between Naval and Military operations.

The spheres of action will therefore be considered as follows ;—

(A) *Offensive*—

Naval. a. (i). Distant reconnaissance with a fleet at sea.

Military. (ii). Distant reconnaissance in conjunction with the "Independent Cavalry" of an army.

Naval. b. (i). Reconnaissance of an enemy's coast, working from detached cruisers or special ships.

Military. (ii). Reconnaissance of the opposing forces are on the edges of the zone of tactical contact.

Naval. c. Assisting cruisers detailed for service on the "Trade Routes."

Naval. d. Assisting submarines in their look-out for vessels to attack.

Naval and Military. e. Aerial conflict.

(B) *Defensive*—

Naval. a. Detecting minelayers at work.

Naval. b. Assisting destroyers to detect and destroy submarines.

Naval. c. (i). Locating hostile craft in areas which are required to be kept clear for war or merchant vessels.

Military. (ii). Locating hostile forces in unexpected areas on land.

Naval. d. (i). Assisting in Coastal patrol work.

Military. (ii). Patrolling on land Line of Communications.

Proceeding to deal with these spheres in turn, it is obvious that items (a), (b) and (c) of the Offensive, and item (d) of the Defensive will be the most interesting and practically cover all the others. These will therefore be treated in greater detail.

A (a) (i). Distant reconnaissance with the fleet at sea.

It is claimed by the advocates of Aeroplanes and Airships that both descriptions can successfully carry out reconnaissance duties, and the special advantages of each class must be considered. In the case of the former the hydro-aeroplane is undoubtedly the best type for the purpose, and with a machine so constructed as to be carried on board cruisers, under fair-weather conditions, it will be possible to reconnoitre an area extending to 60 miles ahead of the parent ship without losing sight of the vessel, then by circling round at the extreme limit of visibility, an enormous area can be brought under observation and speedily reported upon.

It is not considered advisable that the range should be taken beyond the limit of visibility of the parent ship, as touch might be lost and the hydro-aeroplane experience difficulty, and what is a more serious matter—"delay"—in returning with the information required. Negative information often having an important positive value, there exists the necessity of the machine being at all times able to return to the parent ship quickly and with certainty.

Now turning to the Airship, it is placed at a disadvantage by the fact that it cannot always be available when required as it must return to its base for renewals of fuel and gas. Consequently it will have considerable leeway to make good before getting back to the sphere of useful activity. But Naval officers, who are employed in the Airship branch, consider that there should be no insuperable difficulties to airships being towed by men-of-war. The present difficulties appear to lie in the movements of the airship while being towed, and the danger of funnel sparkings. Whether towing is feasible can only be proved by actual experiment, but, if it is practicable, the airship ousts the hydro-aeroplane from its position, and becomes the aircraft *par excellence* for such work, because it will possess the following advantages:—

(i) *Independence of the parent ship*—

Darkness, fog, or reconnoitring out of sight, do not matter, as these craft can be navigated almost as accurately as a ship.

(ii) *Greater powers of endurance*—

(iii) *Communication* can be maintained by wireless from a long distance.

When it is remembered that ten hours' steaming may mean 120 knots, and over, for a battle squadron, and up to 200 knots and over for a cruiser squadron, it will be realised what weight must be laid upon accurate information as to the direction and formations of fleets when they may be approaching each other at anything up to 50 knots an hour, and how valuable such information will be to a Commander-in-Chief in making his own fleet dispositions so as to secure the greatest advantage when battle is joined.

A (a) (ii). Distant Reconnaissance in conjunction with the Independent Cavalry.

On the topography of the country must depend the particular class of aircraft to be used. With ample and good roads available the bases and field hangars can be moved as required, but the balance seems in favour of the airship, in that it can make good greater distances, and transmit its information by wireless therefrom. In a roadless country the airship would also appear to be the better owing to the difficulties connected with the supply of fuel, whilst in a mountainous district it possesses superior navigational qualities.

In F. S. R., Part I, it is very clearly explained that aircraft will be supplementary to the hitherto recognised means of obtaining information, and in this supplementary rôle they may afford valuable aid to the "Independent Cavalry" Commander, in furnishing him with information, which would otherwise have had to be laboriously acquired by patrols, and also in obviating a false trail being followed.

In default of an example from actual warfare, an illustration can be taken from the Army Manœuvres in Cambridgeshire in 1912.

The main forces were about 40 to 50 miles apart, and the Red (Sir D. Haig) aircraft were given the following definite tasks to ascertain—

- (i) whether the Blue concentration was complete and in what locality;
- (ii) whether the Blue advance had commenced;
- (iii) whether a certain line of hills was being prepared as a position.

The answers were communicated to the G. O. C. Red within four hours, and partially to the G. O. C. Red Cavalry Division within 2½ hours, after starting.

Similarly the Blue Commander (Sir J. Grierson) wanted to know the Red lines of advance, and was supplied with the information in a little over two hours.

Both commanders were in possession of the information, regarding the localities of the hostile bivouacs, that evening.

In supplying information regarding definite points, which would be far beyond the reach of patrols, it is obvious that aircraft will greatly lighten the task of the Independent Cavalry.

A (b) (i). Reconnaissance of an enemy's coast from detached cruisers and special ships.

The following extract from the "Tagliche Rundschau" is interesting as portraying the point of view of certain sections of German opinion. After a disquisition on the Navy's need for great rigid air

cruisers as being the only type suitable, the paper proceeds to point out that the modern Zeppelin can cover 425 miles out and back, and still have enough fuel to remain some hours longer in the air. It then goes on to say, "What that means is at once clear if one realises that the distance from Heligoland to Rosyth is exactly 425 miles. In this growing harbour on the Firth of Forth are English battleships and Armoured cruisers of the strong description which come into the first rank for the decision in the high sea battle."

Again later in the same article it is said, "The reconnoitring of Harwich is simpler still; this harbour is 225 miles distant from Heligoland—a mere child's play for our great airships. Dover with its battleships and Armoured cruisers; Sheerness with its reserves; all lie at an excursion distance, so to speak, and could be patrolled all together. As soon as the German Naval authorities have more than four ships of the 20,000 metre capacity, the whole English coast can be entirely scouted in the case of mobilisation."

It may here be mentioned that the German authorities have ordered five Naval Zeppelins to be supplied within the next three years (*i.e.*, by the end of 1915), and attention may be drawn to the fact that, if it be possible for German airships to reconnoitre British Naval bases in the manner indicated, it should be equally possible for British airships to reconnoitre German Naval bases, which are within easy distance of the Isle of Sheppey.

For this particular sphere of action airships appear to have the advantage over aeroplanes, but until the previously mentioned question of towage is decided, a great deal of this class of reconnaissance will have to be carried out by aeroplane, and the risks of non-return to the parent ship accepted and guarded against as far as possible.

Aircraft, out of reach of gun fire at an altitude of 4,000 to 5,000 feet, would be in an excellent position to note movements of ships, arrivals and departures, the fact that vessels were getting up steam, and such like details, all of which would have a definite value.

Knowledge obtained from such means will be of the highest importance to a Commander-in-Chief who is keeping his battle fleets well out of reach of danger from destroyers and submarines, and is waiting for his opponent to issue out from his sheltering harbours to decide the issue on the high seas.

*A (b) (ii).* Reconnaissance when the opposing forces are on the edges of the zone of tactical contact—

As was shown under the heading of Distant Reconnaissance, aircraft must be a valuable adjunct when the main forces are drawing together. It is only possible to quote from the work at the Army Manœuvres of 1912, when on the morning of the second day the main forces were about 30 miles apart, and the advanced troops about ten.

At daybreak both commanders sent out aerial reconnaissances, and the following information was obtained:—

*By G. O. C. Red* in three hours:—"The movements of one Blue Division and transport. Also a position being prepared."



By *G. O. C. Blue* in five hours:—"The movements of Red Mounted troops and the Red Infantry divisions."

The outcome of such information would enable the opposing commanders to appreciate the situation fairly early in the day and consequently to lay out their general line of action. It would place valuable information at the disposal of Advanced Guard Commanders and the Staff would be enabled to afford the heads of the administrative services data which would enable them in turn to get their arrangements worked out for the replenishment of munitions and food.

*A (c).* Assisting cruisers detached for service on the Trade routes.—  
In this sphere there is no room for doubt as to the usefulness of aircraft, and the hydro-aeroplane is the type that would give the best results.

A cruiser detached for the protection of its own, and the destruction of the enemy's, commerce would be very materially assisted by a machine, which, whilst remaining in sight of the parent ship at a distance of 20 miles and at an altitude of 2,000 feet, could circle round her and observe a very large area. Flights undertaken at dawn and in the afternoon would increase the area in which the movements and appearance of all passing vessels would be known to the cruiser captain, and would thus enable him to take such action as might be required to safeguard his own merchantmen or bring hostile craft to account.

*A (d).* Assisting submarines in their look-out for vessels to attack—  
The same conditions that enable successful reconnaissance to be carried out will equally permit of the necessary information being gained and passed to the submarines.

*A (e).* Aerial conflict—

It cannot be admitted that aerial reconnaissance will be permitted to take place without some countering action being attempted.

It would appear that during the preliminary phases aerial reconnaissance will be carried out, and the opposing aviators will not see much of each other. This was one of the curious points brought out by the 1912 Army Manœuvres.

Later on when closer contact has been obtained the possibility of aerial conflict becomes more certain, and fighting machines, protected with armour, carrying a small Q-F. or machine gun, but slower in speed, will come into play.

What form the aerial conflict will take is almost impossible to say, as it is extremely difficult to devise any satisfactory war test, which will take into account the human personal equation, that unknown factor which will always have a decisive effect in war. It may be said that aerial conflict will certainly take place and that aircraft must be developed for attack and defence, and, in order to accomplish their ordinary tasks, they must be prepared to dispose of attacks upon them.

Some members of the Royal Flying Corps think that between aeroplanes the ease will be decided by the gun. In aeroplane *versus*

airship opinions are sharply divided. Aeroplanists maintain that they can disable the airship by dropping bombs on to the gas bag from above, to which the airship men reply that although an aeroplane may be able to attain a greater altitude, it has to ascend in a spiral, whereas the airship can rise equally fast and go ahead at the same time, and it also can carry guns above and below, so that the operation of getting the weather gauge of an airship is not the simple one it would appear at first.

So much for inter-aircraft hostilities. There is another form of aerial attack which must not be forgotten, as it will probably have the most demoralising effects. This particular form is night bombardment by means of dropped bombs.

Thanks to its facilities for navigation, the airship seems peculiarly adapted for these tactics. It has only to arrive in the offing at dusk, verify its position, and then work round to windward. Then with silent engines all that is necessary is to drift over the objective and drop bombs as the sights bear. Luck must to a large extent influence the results, but the feasible possibility exists of such attacks being made upon Dockyards, vessels at anchor, Military bases and camps, Railway bridges and workshops, and the resulting damage being well nigh irretrievable. At the conclusion of the Army Manœuvres the "Gamma" successfully bombarded certain bivouacs, and, when an infantry night attack will stampede the horses of a cavalry regiment as recently occurred to the Queen's Bays, one shudders to think of the results of half a dozen bombs successfully dropped on a dark night into the bivouacs of a cavalry division.

At some period or other a fight will ensue for the command of the air, and the defeat of one side will confer a superiority on the other side, which will seriously hamper the loser temporarily and quite possibly for a period which may prove decisive. How long such command will last it is difficult to say, but the Royal Flying Corps appear to consider that it will be complete, chiefly owing to the disturbing effect that such a disaster will have on the nerves of the surviving pilots.

We now come to the defensive side.

*B (a).* Detecting minelayers at work, and detecting mines when laid—

The first is a matter of vision and recognition of vessels, but it is open to question whether it would be possible, except in dead calm bright weather, to detect laid mines.

*B (b).* Assisting destroyers to detect and destroy submarines—

This again is very much a question of weather and visibility. Submarine officers prefer enough chop to raise white horses, as then the wash caused by the periscope and the screw is practically invisible. Even were they detected it is not easy to explain how they are to be successfully attacked, especially as the latest patterns carry a gun armament. But the information that submarines were in a certain locality would be invaluable to vessels operating in the vicinity.

*B (c) (i).* Localising hostile craft in areas which are required to be kept clear—

This again is only a matter of reconnaissance, but would be important to the commander concerned.

*B (c) (ii).* Localising hostile forces in unexpected directions—

Such information would be very valuable to the military commander in enabling him to guard against surprise.

*B (d) (i).* Assisting in coastal patrol work—

Here it would seem that aircraft would be at their best, as it has been successfully demonstrated that both classes of craft can be moored in the open, though the risk of damage to the airship is greater.

Consequently aircraft should have an useful sphere of action in patrolling the southern and eastern coasts of Great Britain, and the channel between the Orkneys and Norway. The gradual but constant establishment of shore stations by the Admiralty on the East Coast shows that this aspect is not escaping attention.

In coastal patrol work there are none of the difficulties to contend with, which come into existence directly conjunction with fleets or ships is called for, and, when weather conditions permit early and accurate information should be available daily, thus rendering the successful raiding of a coast line an operation of ever-increasing difficulty.

Weather that rendered the use of aircraft impossible would equally prevent the disembarkation of troops on a beach, and fog that prevented the location of raiding force would probably make it impossible for transports and their escorts to reach their objective.

On the other hand, the operations of aircraft can greatly facilitate the task of the commander of an oversea expedition. At present the information at the last transport rendezvous is that which has probably been obtained by secret agents, and quite possibly may not be of very late date. There appears now no reason why an aerial scout should not make a reconnaissance from the last rendezvous and thereby disclose (a) whether the enemy had any special preparations or appeared to be still ignorant of the impending stroke, (b) the actual sea conditions at various landing points. The value of such information, especially when alternative landing places are available, cannot be underestimated.

*B (d) (ii).* Patrolling Lines of Communication on land—

In connection with this sphere, flights at daybreak from important points on the Line of Communications would reveal hostile movements of any magnitude, and enable the Line of Communication Moveable Columns to be put in motion to counter any such attempts.

Having completed the review of the probable spheres of action, we now come to the possible influences on operations. Without access to privileged documents and data, any reasonable line of argument may be claimed as irrefutable, because it can only be deduced from imagination and not based on the results of war experience.

It is therefore proposed to approach this question from four points of view:—

(a) "The Individual" because the successful issue of a commander's plans lie, not entirely in his hands, but largely in the hands of his subordinates of all ranks.

(b) "The Naval Commander."

(c) "The Military Commander."

(d) "The domains of strategy and land tactics."

(a) "The Individual." At first the influence of aircraft will probably be *nil*, because the novelty of seeing aircraft overhead will soon wear off, and very little attention will be paid to them. But, as the forces approach closer, the strain thrown upon the rank and file will be greater, and it may be at breaking point when upon some dark night the bivouacs are successfully bombed. Up to the present darkness has usually brought relaxation of mental tension to a very large proportion of the troops in the field, but the strain has sometimes been too much. If to the already severe strain of modern war is to be added increased mental tension at night, when senses are more highly strung and the imagination is apt to run riot more freely at any strange sound, how long will the rank and file last? Will it mean that all the calculations of "war wastage" will prove so much wastepaper, and that the nation, without its trained manhood, behind it, stands little chance of success in the long run?

(b) "The Naval Commander." Assuming the limit of vision to be 15 miles; gun range to be 14,000 yards or 7 miles; rate of approach 30 knots, *i.e.*, each fleet is steaming at 15 knots; and two fleets to be 30 sea miles apart. In thirty minutes the leading ships are in sight of each other and in forty-five they will be just getting into range.

When it is realised how quickly the miles reel off, and consequently how quickly the Naval Commander must make up his mind, there is little need to emphasise how important the possession of an efficient air service is to him.

Much that has hitherto had to be guessed, such as the proximity of the enemy, his movements, dispositions, course and alterations thereof, speed, etc., will now be accurately and constantly reported.

The influence of aircraft will therefore tend to remove factors of luck and chance which have largely figured previously in the conditions of sea fights, and the tactics to be employed will be determined by the information furnished by the aircraft to the Commander-in-Chief and the influence exercised thereby on his judgment.

(c) "The Military Commander." In many ways what is applicable to his Naval brother is also applicable to the Military commander. Distances are not covered at the same rapid rate, and therefore he will have more time to think out his course of action. But, as concealment of movement by day will be heavily discounted, in order to get the better of his opponent, plans will have to be quickly formed and all the necessary details equally expeditiously carried through. From the commander therefore the influence of aircraft would appear

to demand greater quickness of decision and initiative, and the possession of that personal magnetism which will force his plans through in the face of the most unfavourable conditions.

(d) "The domain of strategy and tactics." Inasmuch as lines of strategical concentration and deployment will no longer be safe from observation by aerial scouts, it would appear that an error in the initial deployment will be more difficult to remedy than when such a mistake might possibly have escaped the notice of the opposing commander.

In the sphere of tactics, it is believed the aircraft will have far-reaching effects :—

*Firstly.*—In relieving the Cavalry and mounted troops of much arduous work, they will be found more capable of intervening vigorously during and after the battle.

*Secondly.*—As concealment of movement by day will be difficult there will be an increased demand for night operations of all kinds, introducing the factors of loss of rest, marching powers, time and space, and general efficiency in night work, the success of which must largely depend on the Staff arrangements connected therewith.

*Lastly.*—When the plans for deployment on the battlefield are being drawn up, may not the aircraft influence tend to contract the size of the battle front, and favour a greater use of the manœuvring reserve as described in F. S. R., Part I, Chapter VII, 102 ?

## RESERVES IN THE RUSSO-JAPANESE WAR.

BY MAJOR H. H. S. KNOX NORTHAMPTONSHIRE REGIMENT.

"In war it matters not so much what is done, but that it be done *with vigour and singularity of purpose.*"

(*Scharnhorst at Prussian Council of War, 5th October 1806.*)

When a commander is about to engage in battle there are certain inevitable questions with regard to his reserves which require an answer:—

- (1) Should he trust his fate to his subordinate commanders and keep only a small reserve, if any at all, in his own hand?
- (2) Should he keep under his command a large reserve with which to force a decision in the fight?

On the replies to these two questions will depend the "form" of his battle as referred to in Field Service Regulations, Part I, Sec. 102 (3); and whatever the "form," a third question arises:—

- (3) What should be the actual strength held in reserve?

Field Service Regulations, Part I, Sec. 102 (3), gives the line of reasoning to be followed in coming to a decision with regard to questions (1) and (2):—The character of the commander, relative numbers, manœuvring power, ground, strategical situation and many other factors have to be considered. In seeking for an answer to the third question there are also certain directions given for guidance:—

F. S. R., Part I, Sec. 104 (3). When attacking, one to three men per yard are required along the whole front, with

three to five men per yard at the decisive point, and the handling of a reserve in a battalion is described in Infantry Training, Sec. 129 (5). When defending,

local reserves should be about equal to the firing line with its supports, and half the total force should be kept in hand for the ultimate decisive blow.

These figures, as stated in Infantry Training, Sec. 142 (8), are given as a general guide. Definite directions are obviously impossible and a general guide is all that should be required, and yet in practice the directions of our regulations would at times appear to be inadequate. Doubt as to the force to be held in reserve is often present. Such doubt is, to a great extent, caused by a lack of a clear conception of the duties of a reserve, or of any guiding principle to be kept in mind in deciding on its strength. When such doubts arise it is well to turn to history. By taking actual

instances, and turning over in the mind the possible considerations which influenced such and such a commander to hold back a half, a third or any other fraction of his force, we become acquainted with the historical facts on which the principles in our regulations are based, and we also, through increased knowledge, begin to understand the line of reasoning that we should adopt in attempting to solve a difficult military problem.

It is then in this humble spirit of enquiry, not in a spirit of mere captious criticism, that the question of the handling reserves in the Russo-Japanese War is approached in the hope that by a study of concrete cases two results may be obtained :—

- (a) A more thorough knowledge of the teaching of our regulations and consequently a firmer grasp of the principles which govern the use of reserves.
- (b) A clearer conception of the guiding idea never absent from the mind of successful commanders when deciding on the strength of their reserves.

In the table which faces pages 413-4 a few figures\* are given showing approximately the proportion of troops held in hand by the commanders in the battles considered. Broadly speaking, the Japanese retained small reserves and the Russians large ones. The figures are a plain statement of fact, and conclusions cannot be drawn from them without giving attention to the various conditions which affected each battle.

The battles of the Russo-Japanese War naturally divide themselves into two periods :—The smaller battles before Liao-Yang and the larger from Liao-Yang onwards. The first which demand attention are Oku's battles :—Nan Shan, Te-li-ssu, and Ta-Shih-Chiao.\*

*Nan Shan.*—A soldier cannot but admire Oku's faith in his untried troops which permitted him to launch three divisions in line against the Nan Shan position. The strategical situation no doubt demanded an immediate victory, and the gods of war favoured his bold action. At the same time it is desirable to consider if the result might not have been attained with less risk. At 11 A.M. Oku had one company in reserve. Imagine what would have occurred had the Russians at any time on the afternoon of the 26th counter-attacked the left of 3rd Division? The lie of the ground on the south side of the Nan Shan position favoured such a course.

The Japanese would have found ample cover for a division in rear of Chin Chou town, two divisions could have pinned the Russians to their position and the third might have assaulted at the will of the Commander-in-Chief. Oku applied the principles of converging tactics to a confined battlefield.

On the Russian side the lessons are negative. They had a reserve of sufficient strength and did not use it owing to jealousy

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\* For maps see the Official History of the Russo-Japanese War.

and indecision in the higher command. It is well to note this common danger of large reserves, they are held too long in hand and a fraction of the army is called on to bear the brunt of the action. The reserve becomes for all practical purposes a detachment from the decisive point. It is a waste of force.

*Te-li-ssu.*—In making deductions from the Japanese dispositions at Te-li-ssu, the fact that the 6th division was arriving must not be overlooked. It was not till noon on the 15th that Oku parted with the second of the two battalions which originally had formed his general reserve. He only did so, then because the leading units of the 6th division had come up.

Then again can the 4th division detached some 15 miles to the west be looked on as a reserve? (See F. S. R., 104 (4).) There appears to be no doubt that the division was detached for protective reasons; but when it was discovered that no immediate danger from that direction was to be anticipated, Oku ordered one brigade to converge on the Russian right. The action of that brigade was decisive and was such as is often demanded of reserves. At first the 4th division was a detachment, but a detachment with-in recall. Once recalled it formed a fresh force under the orders of the Commander-in-Chief and as such had the effect of a reserve. Oku in the preliminary stages of the fight took the risk of having a small reserve under his own hand, he must have suffered considerable anxiety when the 3rd division was hard-pressed, but eventually he was able to converge on the battlefield.

There has been much criticism of Stakelberg's dispositions, but it is interesting to note that the proportion in local and general reserve conforms to our regulations. It is true that there was indecision in the execution of the Russian counter-attack, staff work was bad and unity of action was absent, but the fact should not be overlooked that counter-attack was attempted on a large scale on the 15th of June, 8½ battalions of the 1st E. S. R. D. and 8 battalions of the 2nd Brigade, 35th Division, taking part in it. Stakelberg has received little credit, for his decision of the evening of the 14th. His reserve in hand then was the 2nd Brigade; he detailed it for a definite object, ordering the 1st E. S. R. Division

F. S. R. Sec. 110 (1) to co-operate. It is a refreshing instance of an attempt to strike at the right moment with the general reserve. Stakelberg had in his mind a clear conception of the correct rôle of his general reserve.

Later he wavered, and employed the 34th and 35th Regiments which arrived during the night of the 14th-15th for local defence on the west instead of further reinforcing his blow on the east. Stakelberg was an able leader and that he failed in his attempt to issue from a defensive position and to force his opponent to conform to his movements is only another proof of the difficulty of the employment of a large reserve at the right time and place.

*Ta-Shih-Chiao.*—The third of Oku's battles is Ta-Shih-Chiao. One cannot but look on the 4th division as a reserve in this battle.



Oku was nervous about his left and his orders read as follows:— "The 4th division will take up a position near Wu-Tai-Shan and will hold it in strength as a protection for the left flank of the army. No advance will be made therefrom until it is observed that the general attack elsewhere is succeeding." Not till noon did it advance, though the rest of the army moved in the morning. So we find that Oku had early in the battle a reserve of  $\frac{2}{3}$ ths of his force held in hand for purely defensive reasons. There was no intention of using his reserve for a great blow in depth to penetrate the screen in front of him. His form of battle appeared to contemplate a general advance along his whole front, and from this movement, for a period,  $\frac{2}{3}$ ths of his troops were withheld. When his fears to the west were not realised the 4th division simply advanced to its front. At 8 P.M. one of the remaining regiments of the general reserve was sent to reinforce the 4th division.

It is for consideration if Oku would not have been better advised to have used his general reserve, including the 4th division in support of his right where the 5th division was checked. It is easy to be wise after the event, but there seems to be a lack of dash in Oku's handling of his forces, *e.g.*, his fears for his left, his orders for the 3rd and 5th divisions to advance on the morning of the 25th while apparently 6th and 4th divisions were to remain idle. The holding of a considerable force in reserve for other than a decisive offensive move indicates fear of unknown dangers.

On the Russian side Zarubaiev was simply fighting a delaying action. Perhaps under the circumstances to keep  $\frac{1}{3}$ th of the infantry in reserve was not making "as great a display of forces as possible" (F. S. R., Sec. 72, 4) and there is no evidence of an intention to use the reserve for a decisive stroke. Local reserves were as usual used for direct support of the troops in position. However, Zarubaiev successfully carried out the task he had been given.

What do we learn from Oku's generalship at these three battles?

At Nan-Shan possibly from a just appreciation of his opponents, he ventured to retain only a small portion of his force in reserve. The result gives us some insight into the anxieties of a commander who engages in action without reserves. At Te-li-ssu the risk taken holding back only two battalions of the 3rd division was not so great as at first sight appears. The action of the 4th division in striking the flank of the Russians, even though it did so with only half its weight, was decisive. At Ta-Shih-Chiao the early retirement of the Russians makes the possible effect of Oku's dispositions a matter of conjecture. But from the study of Te-li-ssu and Ta-Shih-Chiao we learn one lesson to guide us in our enquiries: To ascertain the real reserve strength which remains in the hands of the Commander-in-Chief, it is necessary to look beyond the paras. of operation orders which deal with the "General Reserve."

*The Yalu.*—At the battle of Yalu, Zasulich held approximately  $\frac{1}{3}$ rd of his infantry in reserve. His orders were conflicting. Did he really intend to fight or simply to delay Kuroki? There is no trace of any idea of offensive movement with his reserve. About noon on the 1st, two battalions were sent to assist Kashtalinski, the other three battalions remained idle. It is clearly a case of "protective" reserve and its fate is not singular; it resulted in waste of force.

Kuroki with his large numerical preponderance kept  $\frac{1}{4}$ th of his infantry in reserve and used them for pursuit.

These four battles though fought on comparatively narrow fronts furnish no instance of the successful employment of a large general reserve. They drive home the lesson that a reserve held back and not used for a definite purpose is a detachment from the decisive point, and as such is a weakness, not a strength.

Leaving now the preliminary battles of the war, we pass to the great struggles in which the main armies of both nations fought under the command of Marshal Oyama and General Kuropatkin. Conditions are different and it is battles of this size which are referred to in F. S. R., Sec. 102 (3). "With large forces there can be little, if any, hope of being able to strike with the general reserve at the right moment unless the approximate area in which it is to be used is determined in time. In such circumstances, therefore, it will generally be necessary to decide, either at the time when the plans for deployment are being formed, or, at any rate, soon after deployment, where the decision will be forced and to place the reserve accordingly."

*Liao-Yang.*—The battle of Liao-Yang in our Official History is divided into several phases: the first, the attack on the outer line. The Russians had two groups with a group in reserve. The Japanese converged without a general reserve. The Russian general reserve was never used as such.

In the second phase of the battle, the Russians held the advanced position, the line of hills stretching east from Shou Shan Pu. The 2nd, 4th and part of the 1st armies hurled themselves against the Russian trenches while Kuroki was initiating his dangerous move to the right bank of the Taitzu.

In so large and extended a conflict it is desirable to consider first the question of the general reserve of each army, in this and subsequent phases of the battle, and secondly, the handling of the local reserves.

*Russian.*—There are various detachments which may or may not be considered as part of the Russian general reserve, but taking the figures of our Official History we find that Kuropatkin had in hand some  $61\frac{1}{2}$  battalions (8 of which only arrived on the 30th and 31st) or approximately  $\frac{1}{3}$ rd of his force. There is no indication that Kuropatkin ever intended a serious offensive south of the Taitzu with this general reserve. As early as 9 A.M. on August 30th he indicated to Stakelberg that he contemplated retreat. On

the 30th the general reserve was used entirely for local reinforcement, and at the end of the day less than  $\frac{1}{3}$ rd (17 battalions) remained under the hand of the Commander-in-Chief; only 7 battalions out of the 61 $\frac{1}{2}$  had been used for counter-attack as a general reserve.

On the 31st, also, Kuropatkin failed to use his general reserve for counter-attack. He did not consider himself strong enough, and thinking that the protection of his communications was his most pressing duty, he ordered a retirement from the advanced position. Again we see a similar inactivity of reserves, when on the night of 2nd-3rd of September Kuropatkin had the greater part of three corps in hand. The great counter-stroke which he had intended never took place, and the sorely tried 1st Japanese army was left unmolested. At 6 A.M., on September 3rd, Kuropatkin ordered a retreat to the north.

*Japanese.*—Marshal Oyama, on the other hand, held back a comparatively small force, the 4th division (11 battalions),  $\frac{1}{11}$ th of his infantry. The remainder of his troops were at the disposal of the army commanders, and the artillery of the 4th division was not entirely withheld from the fight. The 4th division was echeloned on the left with a definite purpose to meet counter-attack on that flank. It was not used for local reinforcement except that on the 30th four battalions supported the 6th Division. There was no vacillation as to the object of this reserve. At 4-30 P.M. on August 30th, Marshal Oyama was under the impression that the Russians in front of the 4th army were assuming the offensive. He did not alter the disposition of his reserve, but simply ordered Oku with the 2nd army to attack. He gave support by "applying the blister" elsewhere, not by depletion of his reserve. At 4 P.M. on the 31st August when the danger to the west was judged to have passed, the 4th division returned to the command of the 2nd army.

A greater contrast than these two methods of handling a general reserve it is difficult to conceive. On the one hand, doubt and consequent waste of power, on the other, a clearly defined objective, and when that had vanished the immediate return of the forces held in reserve to the control of the army commander from whom they had been withdrawn.

Liao-Yang shows us the value of a definite and clear conception in the mind of the Commander-in-Chief of the subject of his general reserve; given that conception the decision as to the strength to be kept back is simplified and the temptation to fritter away reserves in secondary objects is reduced.

Kuropatkin was an educated soldier of high reputation and great experience of war, that he on each occasion failed to use effectively his general reserve most certainly justifies the statement in our F. S. R., Sec. 100 (2), that the assumption of the offensive from the defensive "demands very high qualities of skill and resolution in the commander." Opportunity for Russian counter-attack was not wanting, but the requisite determination in command was absent.

An exhaustive analysis of the handling of reserves, other than general reserves, in the battle of Liao-Yang would take many pages.. It must suffice to glance at a few incidents:

- (1) The Japanese, the weaker army, were attacking; they pinned their faith on the offensive, so we find everywhere small reserves in hand. When the Guard Division was attacking on the outer line on August 26th, only one battalion was kept in divisional reserve, this battalion, and the whole of the army reserve (2 battalions 29th Kobe Regiment), was used in support of the Guard Division during this day.

The 8th Siberian Corps which opposed the Guard had half its strength in reserve, but never attempted more than a local counter-attack.

- (2) Kuroki again on the 1st September on the right bank of the Taitzu engaged the whole of his three brigades keeping no army reserve. The 3rd brigade was arriving. The Russians opposed to him deployed only one division. Their inactivity, and multiplication of reserves, lost them Manjo Yama.

- (3) Local reserves cannot be dispensed with. Kondratovich, in the left section of the 1st corps, attempted to do without them and got in difficulties. The Japanese too felt the want of local reserves. After describing the gallant efforts of the 6th and 18th Regiments on the 31st of August, when having met with considerable success these units encountered fresh Russian troops, the Official History says "they had no fresh troops to bring up to the assault and could do no more." An eloquent tribute to the value of the last reserve!

- (4) One other point regarding the employment of local reserves in defence demands attention. F.S.R., Part I, Sec. 109 (3), states:—"Local reserves should not be employed to reinforce the firing line." Throughout this and every battle the Russians constantly used their reserves for direct reinforcement, but counter-attacks, by local reserves, when attempted, had far-reaching effects.

- (a) On the afternoon of the 30th August two battalions 22nd E. S. R. R. of General Putilov's force in reserve on the right of the 3rd Siberian Army Corps, took advantage of superior artillery fire, and of most favourable ground, and attacked. They drove back the left of the Japanese 10th division from the villages of Min-Chia-Lan-Tzu and Wu-Chia-Kou. This movement, combined with the stubborn resistance of the 3rd Siberian Corps, led to the retirement of the 10th division, the suspension of the attack of the Guard Division, and the issue of

Oyama's order at 4-30 P.M. that the 2nd army should again attack, an attack that failed.

- (b) Again the repulse of the Japanese 34th Regiment by counter-attack when engaged with the 3rd E. S. R. Regiment on the 31st August caused a lull of some hours in the fighting while Oku brought up his reserves.

Our regulations advance a policy of perfection in laying down that local reserves should act by counter-attack only. It is a policy that commanders would do well to follow. Had the two battalions of the 22nd E. S. R. Regiment simply reinforced the 3rd Siberian Corps in position it is not conceivable that the effect of their action could have been so far reaching. Counter-attack is the correct rôle of local reserves.

*The Shaho.*—At the battle of Shaho Kuropatkin attacked, adopting the converging form of action. He launched two attacking groups, and he held in reserve under his direct command  $\frac{1}{3}$ rd of his infantry,  $\frac{1}{3}$ th of his cavalry and  $\frac{1}{2}$  of his artillery. God and Kuropatkin alone know what was to be the object of this large reserve; however, it was never destined to be employed as a whole. Before Oyama had moved a battalion nearly half of Kuropatkin's reserve had been absorbed in a gap between his two attacking groups; the reserve was frittered away. This craze for excessive reserves had so permeated the whole army from Commander-in-Chief downwards that on the evening of October 11th, when the Russian offensive ended its weak and halting career, only about  $\frac{1}{3}$ ds of the Russian forces had been engaged. The Russian theory of handling reserves was equal in value to a reinforcement of at least three divisions to the Japanese.

Marshal Oyama held in reserve  $\frac{1}{4}$ th of his infantry and  $\frac{1}{4}$ th of his artillery. On the 11th the whole of this reserve went to support the 4th Army, and on the evening of that day, the 1st Army had only small local reserves, and the 2nd Army some  $7\frac{1}{2}$  battalions in hand. The political, financial and strategical situation made it impossible for the Japanese to retreat, and Marshal Oyama risked every man he had in a great effort to force his will on his opponent. He had nothing further to fall back on. The 5th division were being withdrawn to form a reserve. The result justified the risk. Again, on the 13th, Marshal Oyama parted with his last reserve to meet the necessity of the 1st Army.

As at Liao-Yang so at the Shaho we see the value of the commander of a true understanding of the object with which he retains a reserve in hand. Both armies were engaged on the converging "form" of action in which according to our regulations "few, if any, reserves" are retained in hand. Under such circumstances the strength of reserve withheld from the fight is the measure of the anxiety of the Commander-in-Chief. Marshal Oyama well knowing his numerical inferiority and having gauged to a nicety the capacity of his opponent, reduced his reserve to a minimum. Yet he did not hesitate to use it as a support to the armies which he trusted.

Kuropatkin, on the other hand, knew he had numerical superiority, but taking counsel of his fears he adopted a half-hearted measure with the inevitable result:—Waste of power and consequent defeat.

The lessons of Liao-Yang and the Shaho are again confirmed at Mukden. Hesitation and indecision in the employment of a reserve can have only one ending.

*Conclusions.*—The ill success of the large reserve in these battles of the Russo-Japanese War is held, by some writers, to indicate that the commander who trusts to the timely employment of a great general reserve takes an undue risk. Such a conclusion is unjustified. The failures of one war often foreshadow the success of the next. Kuropatkin was several times within an ace of victory, and the qualities which he, and the Russian army, lacked, may be highly developed in the next exponents of the large reserve. The factors noted in F. S. R., Part I, Sec. 102 (3), will decide for the commander the "form" of action he must adopt.

From the study of success and failures in the handling of reserves in the battles of Manchuria, the value of the offensive is evident. A reserve frittered away in local supports, except in exceptional circumstances, invites defeat in detail. Such waste of reserves, as pointed out by Clausewitz (Bk. IV, Chapter IV) indicates moral and physical inferiority. There must be "singularity of purpose" in the handling of the reserve.

A reserve is in a sense a detachment; temporary it is true, but still, for the moment, a detachment. The principles that govern the formation of detachments are known to all. No great leader would make a detachment without fully considering its object. Does not this then indicate that the *object* of the reserve must be the guiding thought when deciding on its strength? But the history of war teems with examples of apparently objectless reserves.

With Oku and Oyama the governing idea in holding back the reserve is evident:—At Ta-Shih-Chiao and Liao-yang (2nd phase) to meet dangers on a flank, that were to them definite; at Nan Shan and the Shaho merely *small* reserves to deal with unseen eventualities. No such clear conception animated the Russian leaders at the Yalu, Nan Shan, Liao-Yang and the Shaho, and in each case the reserve was wasted. At Te-li-ssu, where Stakelberg did allot a definite task to his reserve, lack of energy led to defeat. Success in arms without energy is impossible.

Assuredly a clear appreciation of the rôle of the reserve is the first essential when deciding on its strength. Definite intention is necessary in every operation of war if it is to be carried out "with vigour and singularity of purpose." The handling of reserves is no exception, and yet the fact seems often forgotten. To place a certain proportion of a force in reserve simply because "the book" says so, is the act of a parrot. To hold back a great reserve as an insurance against unknown dangers, thereby weakening

to breaking point the force actually engaged with the enemy is false economy of strength. The commander must ask himself what is to be the task of his reserve? Is its action to be decisive? Is it for purely local counter-attack? Is it simply a small reserve which prudence indicates should be retained in hand? His intention must be clear and fixed. He must have "singularity of purpose." Having decided the object of his reserve, he has then to weigh the topographical and tactical factors which govern the method of its employment. These factors vary in every instance, and only knowledge, the result of study, can ensure their just appreciation. Deliberation will indicate the strength of reserve necessary for the accomplishment of his object. It remains for him "to act with vigour."

The history of the Russo-Japanese War confirms the saying of Scharnhorst, which heads this paper, as to the value of vigour and singularity of purpose. A commander must have in mind clear and fixed intention when forming, and vigour when handling, his reserve. The lack of fixed intention was, in no small measure, the cause of Russian failure. It seems a mere statement of the obvious to say that the intention must never be lost sight of. It appears so simple. But in war the simple is difficult.

Table showing proportion in General Reserve at some battles in the Russo-Japanese War.

Name of battle.	Frontage in miles.	JAPANESE.			RUSSIANS.		Remarks.
		Forces.	Proportion in general reserve (approximate).	Remarks.	Forces.	Proportion in general reserve (approximate).	
NAN SHAN. 26th May 1904.	2 to 4	31,000 bayonets, 198 guns.	1 10th of infantry (1 regt.).	...	16,000 of all ranks and 114 guns.	4/5ths of force.	The reserve actually on the hill was 1 coy. of the 5th Sib. Rifles.
TE-LI-SIU. 15th June 1904.	8	36 battalions, 17 squadrons, 216 guns.	1/18th (2 battalions). On 14th, 5 battalions or 1/7th.)	But 4th Divn. was widely detached, if it is considered a reserve, 1/3rd in reserve. 6th Divn. was also arriving.	35 battalions, 19 squadrons 90 guns.	1/4th of infantry (2nd Bde.), 35th Divn., 8 battalions.	If reinforcements arriving during the fight are added, $\frac{1}{2}$ in reserve. Of the troops detailed to occupy the position approximately, $\frac{1}{2}$ were in local reserve.
TA-SHIH-CHIAO. 24th July 1904.	12 to 15	47 battalions, 20 squadrons, 252 guns.	1/8th infantry (6 battalions)	But the 4th Divn. was held back. If it is considered a reserve Oku had 3/8ths in hand.	48 battalions, 54 squadrons, 112 guns.	1/5th of infantry 10 (battalions) and 2 batteries.	In the left and central sections of the defence approximately, $\frac{1}{2}$ were in local reserve.
YALU. 20th April— 1st May 1904.	12	36 battalions, 9 squadrons, 128 guns.	1/6th of infantry.	...	16½ battalions, 11 squadrons, 48 guns.	1/3rd of infantry.	
LIAO-YANG, 23rd August to 26th August 1904.	40 miles.	115 battalions, 33 squadrons, 470 guns	...	...	191½ battalions, 149 squadrons, 609 guns.	1/3rd (62 battalions, 26½ squadrons, 279 guns).	Reserve was not concentrated.



Remarks.	No. Hops, Guns.	
	1st	2d
1st	30	10
2d	30	10
3d	30	10
4d	30	10
5d	30	10
6d	30	10
7d	30	10
8d	30	10
9d	30	10
10d	30	10
11d	30	10
12d	30	10
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89d	30	10
90d	30	10
91d	30	10
92d	30	10
93d	30	10
94d	30	10
95d	30	10
96d	30	10
97d	30	10
98d	30	10
99d	30	10
100d	30	10

All figures are from the Official History of the Russo-Japanese War, Naval and Military

## COMMUNICATIONS WITH CAVALRY.

**An example based on the Inter-Divisional Manœuvres, 1912.**

BY MAJOR D'A. LEGARD, 17TH LANCERS.

### *Summary of Operations,—1st Day.*

(1) Inter-Divisional manœuvres took place on December 9th—12th, 1912, between 3rd and 7th Divisions.

The general plan of the 7th Divisional Commander involved a movement to the R. Jumna (the frontier) on the 1st day with his whole force and a subsequent crossing of that river, with a view to attacking an enemy's force which was believed to be concentrating about Sonapat. Head-quarters 7th Division therefore was to move west from Dilaura to Bagpat, while the Cavalry Division received orders to march from Budhana to Kutana (a distance of 30 miles), almost parallel to, and about 25 miles distant from, the march of the 7th Division.

(2) A signal company formed part of the 7th Division.

The Cavalry Division had an improvised signal squadron comprising—

2 wireless stations.

8 cyclists.

16 despatch riders and signallers.

(3) *Comments.*

Communication was established each night but little communication was maintained during the day. Two wireless stations were insufficient, and they were only able to communicate at intervals. As the ground over which the manœuvres took place, and the situation each day, are now familiar to many officers, it is thought that a useful example of the communications between the Head-quarters of an army and the independent cavalry can be obtained.

It is therefore proposed to consider the arrangements for communication (quite apart from what actually were made) between the head-quarters of the Eastland Force and the Cavalry Division based on the operations that took place on the 1st and 2nd days of the manœuvres.

The following points seem to be necessary for the efficient carrying out of the signal service—

(a) Co-ordination of the various means of communication by the O. C. Signal Squadron, who is in charge of the whole signal service of the Cavalry Division.

Name of battle.	Frontage in miles.	JAPANESE.			RUSSIANS.		Remarks.
		Forces.	Proportion in general reserve (approximate).	Remarks.	Forces.	Proportion in general reserve (approximate).	
30th August to 31st August 1904.	...	120 battalions, 46 squadrons, 448 guns, 8 battalions Engineers.	1/11th of infantry (11 battalions).	...	210 battalions,* 157 squadrons, 644 guns.	1/3rd.	* Bns. Sqns. Guns. Advance Position ... 90 19 266 General Reserve ... 61½ 30 136 Immediate Flanks ... 26 39 190 Distant Flanks 18½ 50½ 52
		128 battalions, 48 squadrons, 467 guns, 8 Engineer battalions	1/7th of infantry (18 battalions), 1/5th of artillery (8½ guns).	...	257½ battalions, 143 squadrons, 760 guns.	1/3rd of infantry, 1/5th of cavalry, ½ of artillery.	Bns. Sqns. Guns. Eastern Force 73 34 164 Western " 64 40 190 General Reserve ... 137 74 354 General Reserve ... 88 26 326
SHANHO, 7th - 20th September 1904.	40						

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The following points seem to be necessary for the efficient carrying out of the signal service:—

(a) Co-ordination of the various means of communication by the O. C. Signal Squadron, who is in charge of the whole signal service of the Cavalry Division.

- (b) Previous instruction at personal interview to be given by the G. S. O. Cavalry Division to the Officer Commanding Signal Squadron.
- (c) When the Division halts, information to be given as to the probable length of halt.
- (d) Arrangements to be made for supplementing the wireless with alternative methods of transmitting messages.
- (4) *Diagram A* shows the arrangements for inter-communication which it is suggested might have been made if the signal squadron had been provided with the following equipment *viz.* :—
  - 2 wagon wireless stations.
  - 4 pack wireless stations.
  - 8 cyclists.
  - 16 despatch riders and signallers.

(5) The officer in charge of Army Signals, or G. S. O. II (operations section) at Head-quarters, in consultation, at *personal* interview if possible, with the O. C., Signal Squadron Cavalry Division would draw up the following scheme for inter-communication ; make arrangements for the distribution of the signal equipment and the detailing of the relay posts. For this the General Staff are responsible.

The following draft order for Force Operation Orders would be prepared :—

*Communication.*

Communication will be established between Head-quarters and the Cavalry Division both by wireless and by a chain of relay posts, as early as the situation permits, on the lines—

Daula—Baraut.

Bagpat—Kutana.

Detailed instructions have been issued separately.

The signal company at Divisional Head-quarters is conjointly with the signal squadron of the Cavalry Division responsible for maintaining communication between Force Head-quarters and the Cavalry Division.

The distribution of the equipment, personal, would be as follows:—

*With Head-quarters.*

2 wireless wagon stations.

1 „ pack station.

Despatch riders.

*With Cavalry Divisional Headquarters.*

3 wireless pack stations.

Despatch riders.

(6) Force Head-quarters would leave “A” wagon station at Dilaure all day as central signal station.

**Wireless service on 1st Day.**

"B" wagon station would march with the Force Head-quarters to Daula, where it would establish a post, and receive messages from "A" station for definite period, say, 10 A.M. till 1 P.M.

Pack station (C) would at first be in reserve; but, if not needed, would move on and establish post at Bagpat as soon as possible, say, 1 P.M. "B" station would then close, and move to Bagpat. Cavalry Division Head-quarters would leave on pack station (Z) at Budhana; would march (Y) station with the Division and attach (X) station to the reconnoitring detachment pushed out to Chaprauli. Previous information would have been given of the intention to establish (Y) station at Bamnauli 10 A.M.; to open communication with A wagon station. This would allow (2) pack station to close, and follow the Division to Baraut, where it would set up at say 2 P.M. Communication with the reconnoitring detachment (X) station would be ordered at definite hours, say, 10 A.M., 3 P.M. and 8 P.M. Communication between each Head-quarters and their nearest wireless station would be kept up by despatch riders in pairs; a pair being ready detailed as "next for duty," at the wireless station, and with the G. O. C.

Arrangements would also be made to supplement the wireless communication by a complete system of despatch riders, just as if no wireless existed.

(7) *Despatch Riding.*

On the 1st day the roads to be used will be in our own country and therefore safe for small relay posts.

In 1805, Berthier ordered Bernadotte to leave relay posts of 8 men at distances of 2 leagues, when pursuing Kutusof.

In 1807, between Eylau and Osterode (55 miles) there were posts of an N.C.O and 4 men about 12 miles apart.

In 1870, the Germans used to place posts of 10 or 12 men at 8 to 15 miles apart, to keep up communication with the Cavalry Divisions.

Men and horses have not altered. Our own experiences do not lead us to adopt any different system, in the absence of motor cycles. We may follow these examples, and place similar small posts at short distances apart.

*Budhana to Dilaura, via Sardhana Cross Roads, Ganges Canal, distance 35 miles, i.e.—3 intermediate posts.*

*Baraut to Daula, via Eastern Jumna Canal, 20 miles—2 intermediate posts.*

*Kutana to Bagpat, 20 miles—2 intermediate posts.*

Total = 7 relay posts each of one N.C. O. and 4 men—3 supplied by Head-quarters and 4 by the Cavalry Division.

These relay posts would be placed under the "Officer in charge of Army Signals" in the instructions (see para. 5 above) issued to him by the General Staff. He would also be empowered to withdraw these relay posts on his own responsibility when no longer required.

The line of relay posts Budhana to Dilaura would have already been established by the evening of December 8th, therefore the following order only, as regards the other two lines of communication,

would have been inserted in Cavalry Divisional Operation Orders of December 8th.

\* \* \* \*

*Intercommunication.*

Wireless telegraph stations will be established at Baraut and at Kutana as early as the situation permits, if possible by 2 P.M. and 4 P.M. respectively. A chain of relay posts will be established on the line Baraut—Daula by 1 P.M. on the line Kutana—Bagpat by 3 P.M.

The intermediate posts at Maheshpur and Nethla will be furnished by Force Head-quarters.

Posts at Baraut, Alawalpur, Kutana, and Rajpur will be furnished by the 2nd Cavalry Brigade. Each post will consist of—

1 N.C.O.

4 despatch riders.

The officer detailed to command the posts will report at Cavalry Divisional Head-quarters at 9 P.M. to night for special instructions.

\* \* \* \*

(8) *Schedule*, on 1st day, showing method of hourly transmission of wireless messages, from Cavalry Division to Force Head-quarters.

	Method.	From	Through	To
6 A.M.	Wireless ...	Z (Budhana) ...	...	A (Dilaura).
7 " {	Despatch rider and wireless. } ...	Z " ...	A (Dilaura) ...	Head-quarters.
8 "	" ...	Z " ...	A " ...	"
9 "	" ...	Z " ...	A " ...	"
10 "	" ...	Y (Bamnauli)...	A " ...	"
11 "	" ...	Y " ...	A " ...	B (Daula).
12 "	" ...	Y " ...	A and B ...	Head-quarters.
1 P.M.	" ...	Y " ...	B (Daula) ...	C (Bagpat).
2 "	" ...	Z (Baraut) ...	B " ...	C "
3 "	" ...	Z " ...	B " ...	C "
4 "	" ...	Y (Kutana) ...	...	C "
5 "	" ...	Y " ...	...	C "
6 "	" ...	Y " ...	...	C "

(9) *Operations on 2nd Day.*

The Cavalry Division crossed the Jumna at Kutana at 5 A.M., and marched on Lursauli, whence it operated

**2nd Day's operations.** in the triangle Lursauli, Deoru, Murthal and finally withdrew to camp at Murthal.

The Head-quarters moved from Bagpat at 4-30 A.M., and after a heavy engagement near Kheora, halted for the night near Bahalgarh.

*Signal Company (proposed action).*

(10) "A" wireless wagon station would be left as central station at Bagpat. "B" station would proceed with Divisional Head-quarters and be established near Kheora by 9 A.M. It would then accept all messages received meantime from "A" station. "A" station would then close.

"C" pack station would be in reserve with Force Head-quarters.

(11) *Cavalry Division Signal Squadron.*

"Y" pack station would remain at Kutana to transmit messages sent by despatch rider to "A" wagon station at Bagpat.

"Z" station would accompany Cavalry Division Head-quarters in the hope of being able to set up a station during the day. This would not have been possible, and messages would have been sent by despatch riders or helio to Kutana and thence after 10 A.M. "B" station at Kheora.

"X" station would have rejoined Head-quarters at 8 A.M., with 30 Lancers, and been in reserve, ready to accompany any reconnoitring detachment.

*Usual Signalling.*

The signal stations at Kutana and Bagpat were established on high ground, commanding a good view of the country for a distance of 6 to 8 miles westwards, in the direction in which the troops were operating. These stations would have signallers on duty all day.

Signallers with the Cavalry Division and with Head-quarters would be instructed to call up these stations at Kutana and Bagpat, as circumstances required to supplement other means of command. Well mounted staff officers might also have been very usefully employed to carry verbal reports direct from the Cavalry Division to the Force Head-quarters.

(12) At 5 P.M., a service of despatch riders would be organised to work between Murthal and Bahalgarh, preferably of cyclists. Relay posts would not be needed as the distance is only 4 miles.

The relay posts on the lines Budhana—Dilaura

Baraut—Daula

Kutana—Bagpat

would have been withdrawn by the Officer in charge, Army Signals as the need for them gradually ceased.



ST DA

8 Mi

haprauli

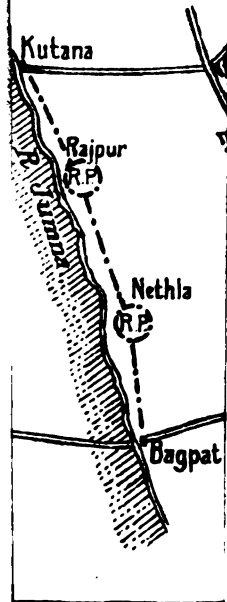
Kutana

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haprauli





## HYDROPHOBIA IN INDIA.

BY MAJOR E. G. S. TROTTER, INDIAN ARMY.

The twelfth annual report of the Kasauli Institute has just been issued, and shows that there is a steady increase in the number of individuals who undergo treatment at the Institute, in spite of the existence of another anti-rabic Institute in Southern India.

The report says that in 1900 the number of patients was 321, of whom 146 were Europeans, whilst in 1912 there were 3,543, of whom 146 were Europeans, whilst the number of military patients rose from 164 to 318.

The contributions to the Kasauli Institute alone appear to have amounted to about Rs. 75,000 and a sum of Rs. 30,000 appears to have been carried forward as credit to 1913. This excludes the expenditure on the Coonoor Institute.

A short time ago the writer was discussing the question, which had arisen in the course of conversation, with two district officers, whose ideas on the subject appeared to be that the native of India had a prejudice against the destruction of animals, and that hence nothing could be done.

The writer, however, knew that something could be done, as in the course of his work he had occasion during an outbreak of hydrophobia to take measures for its suppression.

A committee meeting had been called, and it had been ruled that all dogs should be registered, all registered dogs should wear registry badges, and that those without badges, after due notice had been given, should be destroyed.

This rule is now practically in force in all cantonments in India.

Thereupon the writer called a meeting of the principal Indians in the Cantonment who had protested against the new regulations and put the case before them, thus :—

Q.—Do you know what hydrophobia is ?

A.—Yes.

Q.—Do you know what a horrible death it is ?

A.—Yes.

Q.—Do you want to get it ?

A.—No.

Q.—What are your objections to the new rules ?

A.—An answer in the form of passive resistance, and, from the Hindus, a long rigmarole regarding the hurt-feelings of the community who should see the slaughter of dogs before their eyes.

*Resolution come to :* " Well gentlemen, if you want to get hydrophobia, I don't; and I intend to put a stop to it. All unregistered dogs will accordingly be shot during the next three days between the hours of 6 to 8 A.M., and any one who has religious scruples can close his house and bung up his ears with cotton-wool."

The writer personally superintended and saw not one single house closed nor was anyone a penny piece the worse.

The bag for that year was, speaking from memory, about 600 dogs.

The fact of the matter is that the poor Indian is so horribly cruel in the way in which he illtreats his domestic animals, to say nothing of his under-fed hounds, that his feelings are not worthy of the consideration they might otherwise be, and the well educated Indian has or should have the sense to wish to avoid an excursion to Kasauli, one would imagine.

The question now is, what measures should be taken to stamp out the disease. The Kasauli Institute is merely for its cure, not for its suppression in any way. The writer would make the following suggestions :—

- (a) That a gazetted (veterinary officer for choice) or other officer knowing the language be appointed to conduct measures for its suppression throughout India.
- (b) That he be given the fullest powers within reason.
- (c) That India be divided into circles, each circle being administered by a European gazetted officer, for the present.
- (d) That all dogs in all circles be registered, and be made to wear badges, and that a tax be levied in all towns and municipalities only, and that all dogs unregistered or without badges be destroyed.
- (e) This would of course necessitate detailed registers being kept showing all towns, municipalities, villages, etc., etc., and the names of owners, dates of registry, etc., etc.
- (f) Stringent rules should be drawn up regarding the care of dogs by owners, proper feeding, etc., etc.

The writer, for instance, has frequently seen dogs following their masters' bicycles, and so on, in the heat of the day in the hot weather.

It is believed that some such measures as the above would tend to the stamping out of the disease, but of course if half-hearted measures are taken they would be much worse than useless. To those who say nothing can be done, the reply is only that much has already been done but much still remains to be done. It seems unreasonable to spend large sums of money annually on the cure of a disease when those sums might better be spent on eradicating the disease itself.

One might as well expect those interested in the cure for sleeping-sickness in Uganda to build a large hospital in London and await events. The writer lays stress on the question of *Gazetted* European officers being in charge of operations as the whole matter is one which would have to be dealt with tactfully and firmly in order to do any good at all.

Doubtless there would be obstruction, but all these could be overcome once legislation were in force. Take the case of the obstruction to the Insurance Bill in England !

Or would possibly the whole question not be worthy of a special commission to investigate and report.

Every person who rides through a large native town and who sees the hundreds of mangy, unfed, snarling, snapping curs, owned by no one, feeding on garbage, and all this, in spite of existing regulations regarding their taxation and destruction, realises that the question is one which must be taken out of the hands of local officials and be considered and dealt with by an independent department.

To any one who has spent a night in a large native town and who has been kept awake by the howling and barking of hundreds of curs, must see that it is in the interest of the Indian himself to go into the matter.

To show the extraordinary ideas of the Indian himself, and how they can be got round, the writer once took over command of a detachment in a certain fort.

Having occasion one evening to consult his native officer, he passed the men's cooking-places, and saw semi-wild cats by the dozen literally taking the men's food from them. When asked, the Native Officer said, "doubtless it is a most deplorable state of things, but what can be done? It is against our religion to kill."

The next day the writer made a raid on the cats, and after killing 20 or more in the next week or so, the rest disappeared, calling forth the whispered confidence from the native officer "no doubt the men and I now eat our food in peace?"



## THE TIBETAN FRONTIER.

**Lecture delivered by Lieutenant G. Burrard, R.F.A., at  
Simla, on the 27th August 1918.**

Lieutenant Burrard, in opening his lecture, which was illustrated by lantern slides, said he proposed briefly to run through the following four main headings :—

- (1) A Retrospect of Tibetan Exploration.
- (2) An account of the Frontier, mainly geographical.
- (3) A series of slides showing a typical route through the Himalayas and on to Tibet.
- (4) A short account of Tibetan administration.

As the lecture would not be of interest without the lantern slides which illustrated it, it has not been published.

At the conclusion Sir Henry McMahon who took the chair said :—"Ladies and gentlemen, I will first invite any officer present here who may wish to make any remarks on this interesting lecture kindly to do so."

"Ladies and gentlemen, I take your silence to mean that there is no one here who knows so much of this important subject as the lecturer and that you are not therefore disposed to expose yourself to his criticism. We are very much indebted for this most interesting and instructive lecture which Lieutenant Burrard has just given us. It is not common, in fact I should say it is a unique occasion on which a subaltern of His Majesty's Army in India has had the temerity to face this Institution and put his views on so important a subject before it. But we must remember that he is the son of that very distinguished scientist Colonel Burrard, Surveyor-General of India. Therefore we are by no means astonished at his courage, nor are we surprised at the very able and skilful manner in which he has dealt with his subject. Personally I do not remember having heard the subject put forward in a paper so lucidly as has been done to-day.

"Tibet, as all know, is and always must be an important and most interesting country to us here in India. As Lieutenant Burrard has told us, it has a contiguous frontier with India of over 1,500 miles, and I daresay some of you do not realise that you can enter Tibet within 100 miles as the crow flies, of where we are sitting here in Simla. It is equally interesting for many reasons, not only because it is a mysterious, and has been for many years an unknown, country, but it is interesting to us for many material reasons, mainly those of a geographical and political nature. Lieutenant Burrard has treated the subject purely from the geographical aspect and on certain points connected with geography. We are very much indebted to him for what he has said on this subject.



He has taken us up a very interesting route into Tibet. I might mention here that those slides were made by himself and they do him very great credit. That route which he has illustrated for us is typical, with few variations, of almost every other route in Tibet. I could almost recognise in it places I have seen on routes further west. It is typical of the ruggedness and of the deep, narrow gorges of the earlier mountains of the Himalayan range and the easier slopes and the various characteristic features he has mentioned of the further ranges. Until you get further west, you get into a Tibet which is exactly similar to what he has shown us in his pictures at the top of the Bhagarathi river. Of course Tibet goes considerably further east than what he showed in the map to-day, and we have knowledge of the frontier further east again. Conditions vary a little bit there because the countries on our side, approaching the frontiers, are buried in such dense vegetation, a state of things which we do not get further west.

"The Sanpo, he has stated, bears evidence of having flowed in earlier days in exactly the opposite direction. As we all know, the Himalayas is one of the latest creations in geology. Whether from a shrinkage of the earth's surface or for other reasons, the Himalayas is a newly formed mountain range. It is, I believe I am correct in saying, the most modern of all mountain ranges in the world. Therefore if you do have an enormous mountain range thrust up like the Himalayas, it is quite easy to suppose that some of the rivers would go in the opposite direction, and that is what has taken place with the Sanpo. He has alluded to the doubt which has been felt as the identity of the Sanpo with the Brahmaputra, a doubt which has already been largely dissipated and which will probably be altogether dissipated when we get an account of the explorations of those two officers of the Abor Expedition, Captains Muirhead and Bayley, who have already, we hope, connected the two rivers into one, and visited the spot where those falls are supposed to be. I might say that in another river which comes from Tibet, the Indus, in a portion of the Indus valley which has not been explored between Chilas and the Black Mountain, there are still at this moment believed to be falls of that description. Personally, though I do not like to prophesy, I do not believe in the existence of the falls at either place.

"The political aspect of Tibet is necessarily equally interesting to the geographical, and that interest comes from the geographical position of Tibet, which is, as has been explained, our nearest and largest neighbour in India. I should like to tell you a great deal about that, but I do not feel able to do so this afternoon. All I can say is that the political interest is of immense importance and is fully realised by our Government both in England and in India.

"I will conclude, ladies and gentlemen, by expressing what I know to be your very hearty thanks to Lieutenant Burrard for the most interesting and instructive lecture which he has given us here to-day."

## QUARTERLY SUMMARY OF MILITARY NEWS AND ITEMS OF INTEREST.

### ARMY HEAD-QUARTERS.—*General Staff Branch.*

**1. N. W. Frontier.**—A successful rising against the rule of Badshah Khan, the Khan of Dir, led by his brother Mian Gul Jan resulted in his temporary deposition. Local allies of Mian Gul Jan to the number of some 6,000 defeated the Khan's forces at Akhagram on 5th July, and subsequently marched on and captured Dir. The Khan took refuge in the camp of the Political Agent, Malakand, at Ziarat and those of his forces who fled into Chitral were disarmed at Merkhanni. Throughout August the Khan was busily engaged in attempts to recapture Dir, and, on September 2nd, with the assistance of the Khan of Khar he succeeded in doing so. He has now consolidated his position and all resistance against him has collapsed. No hostility has been displayed by either party towards Government during the recent disturbances, nor has the security of the road been broken.

**2. Death of Captain B. E. A. Pritchard.**—The following are the facts with reference to the death of Captain Pritchard on the North-East Frontier. Captain Pritchard's party were retracing their steps to the junction of the Mungbli Wang with the Taron when the inhabitants were found to have developed an unfriendly attitude and to have loosened the far end of the cane bridge which afforded the only means of crossing, thus rendering it useless.

After considering all means of getting the party across Captain Pritchard insisted, as leader of the party, that it was his duty and his alone to swim the river and tie up the bridge on the far side. The river was 40 yards wide. Signals were arranged between him and Captain Waterfield and a rope was tied round him. He got on well until about midstream, when it was seen that the task was impossible and the force of the current had been underestimated. He was carried down very fast towards a rapid, and the rest of the party followed down the bank, at the same time hauling in the rope.

Before he could be got out of the main current the rope broke. Captain Waterfield rushed down the bank with some of the men to try and intercept him at the head of the rapid, but he was carried underneath before they reached it and he was never seen again. The river was searched for about two miles down stream but no sign of him was seen.

When the rope broke Captain Pritchard knew there was no chance for him and called out "Don't come, good-bye old boy."

**3. Aviation.**—The Maharaja of Rewah has presented an aeroplane for use at the Indian Central Flying School. Captain Massy,

the Commandant of the School, who is now in England, has been asked to purchase the machine.

**4. Staff Exercise.**—It has been arranged to have a staff exercise in the Montgomery Hall, Lahore, from November 4th to 7th.

**5. Manœuvres.**—Manœuvres will be held in the neighbourhood of Dacca during the months of January and February 1914, under the direction of the General Officer Commanding 8th (Lucknow) Division. The following troops will probably take part :—

*Cavalry.*—Part of 12th Cavalry.

” ” 17th

*Artillery.*—4 batteries, R.F.A.

*Infantry.*—2nd Royal Fusiliers.

2nd Black Watch.

2nd East Surreys.

2nd Royal Lancasters.

1st Argyll and Sutherland Highlanders.

17th Infantry.

75th Carnatics.

92nd Punjabis.

113th Infantry.

114th Infantry.

2/10th Gurkhas.

With the exception of the camp of exercise in the neighbourhood of Dacca there will only be Brigade manœuvres in India next cold weather.

#### *Adjutant-General's Branch.*

1. The Balance-sheet of the Patriotic and Indian Heroes' Funds shows a balance credit of Rs. 3,40,100.

This fund, originally subscribed during the 2nd Afghan War, may be opened in time of war under authority of the Government of India for the relief of families of Indian soldiers who lose their lives on service.

There is also a fund amounting to Rs. 40,000 administered by the Adjutant-General in India, the interest on which may be granted in peace time to deserving followers who are discharged without being entitled to a pension. Some 28 followers get a monthly pension of Rs. 3 per mensem from this source.

2. The British Army Championship Jewels, presented by the Army Rifle Association, have been won as follows :—

Gold Jewel.—Lce.-Corporal D. Fraser, 1st Seaforth Highlanders, 81 points.

Silver Jewel.—Clr.-Sergt. F. Osborne, 2nd Norfolk Regiment, 80 points.

Bronze Jewel.—Lieut. D. A. James, 1st Border Regiment, 75 points.

3. It has been decided that machine gun equipment of cavalry in India are to be carried on pack horses. The S. A. A. reserve, Pioneer equipment, entrenching tools and signalling equipment will be on pack mules, which can be led by mounted men, when required.

4. Claims for the replacement of lost medals will be dealt with by the Government of India, Army Department. All applications from officers and others should therefore be transmitted to the Secretary to the Government of India, Army Department, Simla, and not to the Mint Master, Calcutta, or Bombay.

*Quartermaster-General's Branch.*

The Bengal-Nagpur, Nizam's Guaranteed State, Madras and Southern Mahratta, and South Indian Railways have now accepted the use of Form E by Captains and Subalterns travelling at their own expense on the same conditions as the other principal railways in India.

The other railways which already allow the concession are—

The N. W. Railway.

„ E. I. Railway.

„ E. B. State Railway.

„ G. I. P. Railway.

„ B. B. & C. I. Railway.

„ O. & R. Railway.

3RD (LAHORE) DIVISION.

(i) The 3rd (Lahore) Division will not be able to carry out any Divisional Manœuvres during the forthcoming Training Season, but the War Brigades of the Division will all be out for Brigade training periods and in some cases there will also be Inter-Brigade Manœuvres at the conclusion of the Brigade training periods.

(ii) Cavalry and Infantry will attend the various Artillery Practice Camps for the special purpose of practising co-operation with Artillery.

(iii) A Divisional Staff Tour will take place in the vicinity of Hoshiarpur from the 2nd to 4th December under the direction of the Northern Army Commander.

4TH (QUETTA) DIVISION.

There are now two Infantry Brigades in Quetta. The Indian Infantry Regiments at Chaman, Fort Sandeman and Loralai are included in the 2nd Quetta Infantry Brigade for training.

2. Company and Battalion training camps have continued from April to July. August has been devoted to Boxing Tournaments and Rifle Meetings. The latter has continued for a

fortnight, the experiment of firing in the mornings only has been a success.

Brigade and Divisional training commences early in September, and will be continued until the end of October. The period will consist of Brigade training from cantonments from the 5th—18th September : Inter-Brigade and Divisional training from the 20th—30th September when all the troops will be in camp. In October the Artillery Practice Camp will be held from 10th—18th, after which a series of Inter-Brigade and Divisional exercises will be conducted, and a Divisional Staff Tour. The last two items will be directed by the Southern Army Commander.

3. A Divisional Staff Tour, primarily for instruction in Staff administrative duties, was held in May.

4. A Field Ambulance Camp of Instruction was held in May, the first camp of the kind that has been held in the Division.

5. No. 33 Signal Company arrived in Quetta at the end of last year, and now belongs permanently to the Division.

6. A very successful Assault-at-Arms was held in April, and was attended by every available unit in the Division. The pageant organised at the Prize-giving consisted of representatives of all units massed in close order.

7. New Divisional Staff Offices are in the course of erection. Amongst other buildings additional quarters for married students at the Staff College are now almost completed.

8. Owing to heavy rain Quetta was practically isolated from the south between the 25th August and 2nd September. Through railway communication was not expected before the 8th September, but after the 2nd, transhipment of passengers was feasible. Some 30 miles of lines were interrupted between Bell-Pat and Methri, south of Sibi. The floods are said to have been higher by 17 inches than any previously recorded.

#### 9TH (SECUNDERABAD) DIVISION.

1. Assaults-at-Arms were held at Secunderabad and Bangalore in July with the following results :—

##### *At Secunderabad.*

Best British Officer, Mounted	..	Captain Montgomery, 7th Dragoon Guards.
" " Dismounted	...	No prize awarded.
Best Indian Officer, Mounted	...	Woordie-Major Mahbub Khan, 20th Deccan Horse.
Best British man at arms, Mounted	...	Squadron Sergeant-Major Moore, 7th Dragoon Guards.
" " " Dismounted	..	Sergeant Wheeler, 2nd Bn., The King's (Shropshire L. I.)
Best Indian man at arms, Mounted	...	Daffadar Shaikh Khan, 20th Deccan Horse.
Best regiment at arms, Mounted	...	7th Dragoon Guards
" " " Dismounted	...	94th Russell's Infantry.

*At Bangalore.*

Best British Officer, Mounted	...	Lieutenant and Riding Master F. L. Andrews, 7th Q. O., Hussars
" " " Dismounted	...	Lieutenant A. S. C. Rogers, 61st Pioneers.
Best Indian Officer, Mounted	...	Jemadar Kasi Rae Swidhay, Imperial Service Lancers.
" " " Dismounted	...	Jemadar Ahmed Din, 101st Grenadiers.
Best British man at arms, Mounted	...	Corporal Mair, S. Battery, Royal Horse Artillery.
" " " Dismounted	..	Colour-Sergeant Cameron, Q O. Cameron Highlanders.
Best regiment at arms, British	...	Q. O. Cameron Highlanders
" " " Indian	...	101st Grenadiers
Best Indian man at arms, Mounted	...	Daffadar Mahomed Khan, 26th (K. G. O.) Light Cavalry.

2. Artillery Camp and Brigade Trainings will be held at Secunderabad and Bangalore in November and December.

Inter-Brigade Manœuvres will take place at Secunderabad, 18th—21st December.

3. His Excellency the Viceroy visits Hyderabad from the 29th October to 1st November, and Bangalore from the 19th to 20th November 1913. He visits Mysore between the above dates.



## EXTRACTS OF GENERAL INTEREST FROM THE RUSSIAN PRESS.

In the *Russkii Invalid* of 11th April 1913, a long article appears (evidently official) justifying the position taken up by the Russian Government in regard to the Balkan War. It points out that its action has been misunderstood in Russia, and then proceeds mainly as follows:—

The Imperial Government desired to uphold the victories of the allies. Its first duty however was to localise the war. The fruits of victory could only be obtained if Powers did not interfere. To realise what Russia has done the international situation must be looked at as a whole. The war could only be localised if the Powers refused to take advantage of it and if they agreed to do nothing individually. The conditions produced by the war could not be considered alone but must include the various interests of the Powers; therefore the conference in London was convened. This conference has defined the Northern and North-Western Boundaries of Albania.

Trouble arose here between Montenegro and Serbia relying on Russia on the one hand and Albania relying on Austria and Italy on the other. The maintenance of the *status quo* on the Adriatic is vital for Austria and Italy. But it raises the question of the possibility of existence of Albania. It clashed with the victor's rights but balance weighed in favour of a complete Albania. The Powers could not allow this question to develop into a serious quarrel. A compromise was made in which Russia thought Scutari should belong to Albania. This was in the interests of peace. Skutari is a real Albanian town. More than a year ago our Consul there advised that we should not encourage Montenegrin designs on Skutari. The Montenegrins have not assimilated the Albanian Catholic and Musalmans who joined their territory after war of 1877-78. It would therefore have been a source of weakness for Montenegro to include Skutari in her territory and the population might soon have become hostile to her. Besides this the King of Montenegro did not fulfil his promise to inform Russia that he was about to open war and wait for her sanction.

Further he has been warned that further fighting is useless, but he has not listened to the advice as he desired to involve Europe in a war. Consequently Russia does not oppose the measures taken by Europe, namely, blockade.

Though Russia feels for Montenegro the Government cannot allow blood to be shed except in the interests of the country.

Russia will never spare its blood in defence of brother Slav. But they must not expect her simply to always fulfil their demands and wishes. They must treat with respect our advice and remember



that without us they cannot exist. Russia brought them into the world and without her they cannot become strong. This is our standpoint with regard to other Slav states. It excludes enmity to other nations. Difference in race does not necessarily mean antagonism.

#### GERMANY IN ASIATIC TURKEY.

*Extract from the "Novoye Vremya" of 20th April 1913.*

For the last twenty years Germany has been active in strengthening her political and economic influence in Turkey. The deposition of Abdul Hamid struck a severe blow at this influence, but the late German Ambassador at Constantinople, Baron Marshal von Biebustein was able to re-establish this influence with the new regime. Baron Wagenheim, his successor, one of the most capable of German diplomatists, was preparing to carry on the work, but all the German plans were upset by this outbreak of the Balkan war. The destruction of Turkey might well have meant also the destruction of German influence on the Bosphorus, as the Turkish army had been for twenty years modelled and instructed by German teachers. However this was not the case. A whole series of valuable services afforded by Germany to Turkey during the war made it possible for German policy to maintain its position in Constantinople.

Germany's chief attention will now be directed to Turkey in Asia. Herr von Yazof, State Secretary for Foreign Affairs, announced in the Reichstag, that Germany will assist Turkey in the forthcoming negotiations so that the latter may not meet with difficulties in the development of her Asiatic possessions. The meaning of this somewhat vague statement is, of course, that Germany wishes to ensure for herself full liberty in giving assistance to Turkey. This assistance can only be requited by Turkey giving to Germany concessions of every kind, with the help of which Germany will establish practically a protectorate over Asia Minor. This announcement in the Reichstag fully coincides with statements made to me in Constantinople ten days ago by local German agents. The latter did not hide their vexation at the Turkish defeat, but at the same time emphasised the point that all that had happened would not have the slightest influence on German undertakings in Asiatic Turkey.

The Germans will now strive to profit by the difficulties, into which Turkey has fallen, in order to gain a tighter hold over the Asiatic possessions of the latter. The German Ambassador in Constantinople has put forward a demand of the concession of a port in Syria, and from a telegram of yesterday's date it appears that Germany has obtained the concession of the Samsun-Sivas railway.

Russia is more interested in the fate of Asia Minor than any other nation in Europe. It has fallen into grasping German hands,

and up till now we have merely taken the part of spectators of this incident, so damaging to us.

But shall we take only the part of spectator in the future? To this question there can be but one reply. If Germany is going to profit by Turkey's present predicament to wring important concessions from her, then Russian diplomacy must interpose energetically, and guard Russian interests in Asia Minor by measures of a positive nature.

#### ENGLISH PUBLIC OPINION AND THE DIPLOMACY OF THE TRIPLE ENTENTE.

English public opinion blames the diplomacy of the Triple Entente for sacrificing vital interests for the maintenance of peace at any cost.

This diplomacy has nevertheless twice compelled its opponents to choose between the acceptance of its views and war and has twice carried its point. So it was after the first successes of the Balkan arms when Austria was inclined to interfere, and later when Austria and Italy were contemplating the occupation of Albania. The yielding nature of Russian diplomacy in the question of Durazzo and Skutari is explainable by the fact that England could not give her consent to a war upon these points. France would have unwillingly entered upon this and would certainly have demanded further counter-securities. Russia was vitally interested in the preservation of the results of the Balkan war. France and England supported her in the main points and fairness demanded that Russia should not insist on a less important one, for the scheme of maintaining not only an outward but a real inward unity. All three members of the Triple Agreement support the idea of the creation of an Albania independent of Italy and Austria and do not intend to allow these Powers any privilege in Albania.

In the communications which the Cabinet made to the Press, it was not pointed out how firmly the members of the Triple Agreement supported the Balkan Allies at the meeting of Ambassadors.

The pessimistic trend of public opinion was due partly to the inability of diplomacy, in particular that of Russia, to make use of the Press and also to the fact that blunt declarations of such a type as the speech of the Imperial Chancellor Bethman Hollweg regarding a Germano-Austrian campaign and that of the German Ambassador in Constantinople Wagenheim about Germany's protectorate over Asiatic Turkey remained unanswered.

Apart from the fact that much was hidden from public opinion, the public, on the chief points, was not mistaken and certainly the action of the Triple Agreement should have been more open and energetic. This would not have brought war after it but would have confirmed peace.

The danger of collision is not yet entirely removed and may be occasioned by the endeavours of Italy to keep Northern Epirus for Albania and several Aegian Islands for herself. France will oppose

such Italian ambitions and England will support her in this opposition and Russia ought to do the same.

### THE STORMING OF SKUTARI.

*7th, 8th and 9th February 1913.*

Skutari, the ancient capital of ancient Montenegro, stands on the south of Lake Skutari. The towers of the present town are no longer as of old, and are surrounded by the inaccessible forts of—

Tarabosh.	Pochram.
Brditsa.	Megush.
Bardaniol.	Pristula.
Great* and Little* Bushat.	Dancha.

and smaller redoubts and works besides.

The strongest position forming the key to Skutari is occupied by Tarabosh, which has a redoubt on a commanding height, and a number of lunettes all round, defended by siege artillery, with obstacles including military pits, barbed wire, etc., for a distance of 150 to 200 metres. This fort is unapproachable from every site without exposure to fire.

The Montenegrin army was at first divided into three portions for the capture of these permanent fortifications, with a view to starving them out. The whole army, only 40,000, was too small for the task. There were also two enemies, Turkey and Austria, and 8,400 men were left to watch the Austrian frontier. The garrison of 13,000 were thus left free to provision themselves from the direction of Brditsa and Bushat, which could not be closed. In addition the Montenegrin's siege artillery was inferior to that of the defenders, and the army was not equipped on modern lines for the siege work.

The investment was not completed till Bushat and Brditsa were occupied by the Servian troops, who came up by forced marches on the 23rd January (15th February) from Lyesh. Bushat, held by four *tabors* of regulars, besides a multitude of Bashi Bazouks and six Krupp guns, was not occupied until the Servians had captured the important positions of Pochram and Dancha after a stubborn resistance.

The defence was under the energetic command of Asopaga-Bushatli.

Bushat stands on an inaccessible height, and is strongly protected by two towers, situated below the river Drin. The bombardment of Bushat commencing at 6 P.M. lasted all night. The bombardment was increased on the following morning. At 12 noon the Servians delivered the assault, and at 12-30 the Servian flag waved over the fortifications of Bushat. The Turks fled leaving behind numerous killed and prisoners.

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\* NOTE BY TRANSLATOR.—These adjectives are translated as given here in the original. Later in the article, however, they are used with reference to Bardaniol (and not Bushat).—W. B.

According to the decision of the Serbo-Montenegrin Staff, three Montenegrin brigades were to come into action that same afternoon at 4 p.m., while the Servian troops occupied Bushat and Brditsa. The capture of Bushat had succeeded, but for numerous reasons, the attack on Brditsa failed.

The artillery preparation was inadequate, the bravery of the Servians was unbounded but they were over-confident, but the chief cause of failure was the unique heroism of the 3,000 Turks and the artillery support from Tarabosh. The Turks know that with the fall of Brditsa the besieging circle, from Little Bardaniol to Shiroka will be impenetrable, and the assault on Skutari greatly facilitated. The Servians were compelled after two days' attack to fall back on Bushat, with a loss of 1,400 killed and wounded.

The chief assault was to be directed against Great Bardaniol, standing on an eminence over 1,000 feet to the west of the town of Skutari. This was to be simultaneous with the assault on Bushat and Brditsa. After 4 hours' bombardment, the Montenegrin division was to attack the Bardaniol position, which was protected all round by wire entanglements. The Montenegrin forces approached this inaccessible position at 8-30 a.m., and came to a standstill at rifle range. King Nicholas remained at the observation point of Grusmir during this.

The assault began prematurely in spite of the King's repeated refusals to permit a previous advance, and the battle proved to be sanguinary.

Four hundred Montenegrin volunteers perished while cutting a way through the wire entanglements, the Servian artillery having been compelled meanwhile to cease firing.

The Montenegrin army was engaged along its whole front, the right flank near the coast drove the Turks out of their position at Chuos, situated close under Tarabosh, the left column advanced against the right side of Lake Skutari, towards the Shiroka position.

The central position of the force from near the coast was to advance on Tarabosh, clear the way and destroy the wire entanglements. Many gaps of 3 and 4 metres wide were made at a terrible cost.

The infantry occupied a position of 160 to 250 metres near the main defences of Tarabosh. Night came on, and with it, as at Bardaniol, Bushat, and Brditsa, the sanguinary battle here ceased.

At 4 a.m. the next morning, 27th January (9th February), the fortifications of Great Bardaniol were captured with terrible loss by the glorious Montenegrin army after a two hours hand-to-hand conflict. The Turkish troops retreated in the utmost disorder to the Little Bardaniol (height 529 feet).

This was showered with common shell and shrapnel by the Montenegrin artillery. The Turks were compelled to retire over the bridge to Kira leaving numbers of killed and wounded behind

them. With the capture of Bardaniol the battle practically ceased along the whole line.

Thus on the 27th January (9th February) the eastern army occupied Bardaniol, the southern Bushat, the north-western portion Tarabosh, Pupka, and the western Shiroka mountain. In this way the Montenegrin army, on the north, stands between the town of Skutari and Shiroka, maintaining connection on Tarabosh with the western positions.

After these successes the allies drew the cordon of the siege somewhat tighter in preparation for a night assault. All the foreign military attachés were more than enthusiastic as to the skill and perfection of modern science shown in the fortifications, as well as the incredible daring of the Montenegrin assaulting troops, who lost 10,000 in killed and wounded, in the capture of a quarter of the fortifications of Skutari.

Snow, gales on Skutari lake, and flooded marshes and rivers render it impossible to transfer the wounded to Vir, the river Podgoritsa, and other places with hospitals. The desperate condition of these sufferers is hard to describe.

A valiant country is perishing before the eyes of Christian Europe, the advanced guard of Christian nations against the savage Mahomedan hordes.

It cannot surely be that Russia too will abandon her oldest and truest friend ?

#### SOCIETY FOR THE PROMOTION OF MILITARY SCIENCE.

*Translated from "Russkii Invalid," 18th March 1918.*

A lecture was delivered on the 12th March by G. Shumkov, Doctor of Medicine and President of the Military Psychology section of the Society, on "The Spirit of the Bulgarian Army as a result of training."

In computing the factors of success in war the spirit of a nation and army are sometimes omitted. The result is that the weaker side physically very often wins, much to the surprise of all.

The success of the allies in the Balkans affords much room for speculation as to its causes. Doctor Shumkov has made a study of the subject as regards Bulgaria, and the facts at his disposal render his opinions both convincing and of great interest.

Was there a distinct wave of enthusiasm amongst the Balkans ? Judging from the carrying out of mobilisation, there can be no doubt, and it was accompanied by the greatest animation. Historical causes are an insufficient explanation which must be looked for in high living ideals. The Bulgarians realised this thoroughly and long ago began the gradual education of national spirit. Sixteen years ago, General Savoff, then head of the Military College of Sophia, insisted on the introduction of a special course of military psychology. This became a compulsory subject in all

military educational institutions. A text-book was written containing the following headings:—

- |                          |                               |
|--------------------------|-------------------------------|
| (1) Military psychology. | } Divided into                |
| (2) Training.            |                               |
| (3) Military ethics.     |                               |
|                          | Moral elements,               |
|                          | Method and means of training. |

Doctor Shumkov's lecture was principally devoted to an examination of this course in military education. It is a course that has been worked through by many hundreds of Bulgarian officers, and there can be no doubt that the doctrines of the text-book have, through them, been thoroughly absorbed by the mass of the army, in whose character training it has been so admirably reflected during the war.

The first part of the text-book deals with military psychology generally, and the working of human emotions in war in particular.

In the second part on military training, its object and origin are worked out, including the training of powers of observation, familiarity with danger, initiative, imagination, etc.

In the third part, the ethics and morality of war are treated, which include conscience and morals generally. The development of the sense of duty is laid great stress on by the Bulgarians in the education of the soldier, and the inculcation of discipline. The man is taught his duties—

- (1) to God, *i.e.*, religion;
- (2) to men, *i.e.*, the King, officers, comrades, his country men, the enemy;
- (3) to himself (personal morality), development of the mind, emotions, and will, heroism, bravery, daring, decision, coolness, patience, and endurance.

The means and method of instruction vary with and are adapted to circumstances. The lecturer reviewed these and then dwelt on the question of emotions, in battle, the eradication of fear in one's own troops, and its creation in the enemy, and other moral factors, including the production of panic by means of sights and sounds.

The brilliant victories of the Bulgarians are the outcome of a titanic effort of will by a strong-minded and spirited nation. The achievement is attributable to a definite system of character training, as outlined in the text-book referred to, which therefore merits the same degree of attention as accorded to the actual fact of the Bulgarian victories.

There is no doubt that prevailing ideas on military psychology in the Russian army are somewhat hazy. It is therefore a matter of no small satisfaction that the third part of the above official Bulgarian text-book on this subject has been translated and published as an appendix to the *Voenni Sbornik* for 1912, while all three parts are to be separately published shortly.

## THE NEW ARMAMENTS OF THE POWERS.

(*Novoye Vremya*, No. 13317, 21st April 1913.)

The new German Bill aims not so much at creating new units as raising the peace strength of the army, especially those portions of it quartered near the frontier. The material for this purpose will be found in the young men of the "Ersatz Reserve" who hitherto have not served in the ranks and have been called up for training only for a short time. In 1911 they numbered 92,000. It is proposed to bring up the strength of the company and the battery to 141 and 113 men respectively within the Empire, and to 160 and 128 on the frontier. The army will thus in two years' time be increased by 400 officers and 15,000 under-officers and 117,000 men. This addition will go to raising the peace strength of nearly all arms, to forming 18 third battalions in regiments which hitherto have had only two (i.e., 669 instead of 651 infantry battalions), and to forming 6 new cavalry regiments. Besides it is proposed to maintain all batteries on the frontier horsed.

Up to the present in Germany there have been three peace establishments for infantry—high, medium and low. It is now proposed to have only two, *viz.*, the high (69 per cent of the war strength against the former 61) per cent for frontier districts, and the ordinary (61 per cent as compared with the former 53) per cent in the interior. The same change is proposed for the other arms also. Thus it is not proposed to raise new corps but to increase the strength of units and render mobilisation quicker, for the numbers to be called to the colours from the reserve and the provision of horses are decreased.

The increased expenditure involved amounts to 898 million marks spread over three years, but of that sum 435 millions are asked for this year. A part of this money (210 million marks) will go to strengthening fortresses, especially on the eastern frontier. The district of the Oder it is proposed to strengthen by reconstructing and widening the area of the fortifications of Breslau and Glogau. Several improvements will also be carried out at Posen on the Warthe. Thorn is held to satisfy modern demand but Graudenz will be strengthened. Lastly it is proposed to extend considerably the fortress of Königsberg, which covers the concentration of large forces for the invasion of Russia.

The German Bill evoked in France a series of corresponding measures, directed towards the strengthening of the defensive capabilities of the country. The chief of these was the return of the three years' term of service with the colours, which, although it lessens the number of reservists, will enable the French to improve the organisation of their units and obtain a more reliable army for the first blows, which often decide the fate of a whole campaign.

According to French accounts, the peace strength of the army will increase by nearly 200,000 men (i.e., it will show 750,000 instead of 546,000), and at the same time the percentage of reservists in frontier infantry units will decrease to 28 or 3 per cent less

than with the Germans, in the cavalry to 30 (Germany 36 per cent), and in the artillery to 6 (Germany 10 per cent). Thus the first line French army when brought up to full strength by reservists will have 1,340,000 men, and though the German army will outnumber it by 570,000 men, it is supposed that the French army will not fight alone but that part of the German army will be drawn off to the east.

Amongst other measures to enable France to oppose the maximum amount of resistance, is the fortification of the eastern frontier, already long given effect to. On that frontier there are, commencing from Mezieres, in first line four fortified camps—Verdun, Toul, Epinal and Belfort. The intervals between them are strengthened by separate forts, with the exception of the section Mezieres-Verdun, which is covered by the Meuse. If the first line is pierced, an advance on Paris is checked by a second line of fortresses—Rheims, Langres, Besancon and Dijon. Finally the innermost defence is Paris, surrounded by three lines of fortifications of about 130 kilometres extent, the blockade of which would require an enormous force.





## REVIEWS OF BOOKS.

**A History of Cavalry from the Earliest Times.**—By Col. George T. Denison, late Commanding the Governor-General's Body-guard, Canada. Second Edition. Published by Macmillan and Co. Price 10s. 6d. net.

This book is a reprint of the original, which was first published in 1877, and to which was awarded a prize of 5,000 roubles by the Emperor of Russia. The author has added a preface in which he touches on the recent discussions regarding the rôle and armament of cavalry. The interest of the book is mainly antiquarian, and the details given regarding the various actions, are not sufficient to help the reader to any great degree in the work of theoretical reconstruction with the exception possibly of the chapter on the American Civil War. We can hardly accept the author's organisation of cavalry, in which he suggests that the mounted troops should be divided into "cavalry proper," apparently intended solely for the rôle of shock action, and "mounted rifles," who should only be capable of fighting on foot. The author appears to have allowed himself to be so prejudiced by the writings of Mr. Childers and the "most illuminating experiences" of the Boer War, that he has not even considered the possibilities of the combination of fire and shock action. The most interesting portion of the book from a modern point of view is perhaps the discussion on the revolver as a substitute for the sword or lance, but unfortunately the author has omitted all reference to the previous training of the troops, who used it so effectually in the American Civil War and the general consensus of modern opinion appears to be that the possibility of its use by mounted troops is entirely dependent on the possibility of training the rank and file of the men, who present themselves for enlistment, to use the revolver or pistol with less danger to themselves than to the enemy.

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**Organization, Administration and Equipment Made Easy.**—By Lieut.-Colonel S. T. Banning. Published by Gale and Polden. Price 4s. 6d.

This is the thirteenth edition of this publication, which fact is of itself sufficient testimony to the demand that exists for it—a demand which unfortunately shows the continued preference of the British Officer for the "cram book" over the official regulations. It cannot be looked upon otherwise than as a trouble saving device, and as such it must be read together with the regulations to which it refers, or else the so-called student will be liable to acquire information which is not quite in accordance with facts.

For instance, on page 14 we are told that the army in India is organised in 10 divisions, but nowhere is it stated that the Indian peace division is a very much larger organisation than is the Home war division, or the reasons for this difference in size. Again from page 85 one would be led to infer that the Supply and Transport Corps of the Indian Army was organised in cadres throughout: the author has presumably been misled by the fact that certain transport units belonging to the Corps exist in peace time as cadres. The author's extracts from Field Service Regulations, Part II, are in places inaccurately reproduced, *e.g.*, on page 107 the responsibility of the General Staff towards the Medical Services in regard to tactical dispositions has not been alluded to. On page 141. the "senior combatant officer" is made responsible for taking command at a post on the lines of communication in case of actual attack: this is at variance with F. S. R., II, sec. 10 (8). Again on page 143 we find a wrong definition of the word "railhead": on the following page we find an obsolete term used in "Director of Railways": whilst on page 153 an arbitrary distance is laid down between railheads and refilling points, which does not interpret the spirit of F. S. R., II, sec. 51 (3).

The candidate for a promotion examination, who elects to use this book to prepare himself for that ordeal, will do well to follow the author's advice in the preface to the first edition and refer in addition to the recognized text books in order to "verify the accuracy of the facts."

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**Company Training.**—By General Haking. Published by Hugh Rees, Ltd. Price 5s.

Those who have read "Staff Rides and Regimental Tours" would anticipate that any further military publication by the same author would be most valuable and interesting, and in "Company Training," their expectations are realised to the full.

This is a book which, without doubt, should be in the possession of every military library, and available for study by all officers, particularly Company Commanders. It is a veritable *vade mecum* for a Company Commander who is putting his company through annual Company Training, and its only drawback appears to be that an officer using it finds every conceivable consideration so carefully worked out, that very little is left to his individual ingenuity and imagination, as it would be difficult to improve on the systems and course of training propounded.

General Haking lays particular stress throughout on the Human Element in War, and Chapter I is a particularly powerful chapter in this respect.

The careful and detailed consideration of every imaginable situation, which might tend to make the perusal of the various chapters tedious, are relieved by humorous remarks and similes, which greatly help towards maintaining interest, and afford

suggestions for a similar procedure when the Company Commander is instructing his men.

In Chapter VI the arguments as to the best formation in the first phase of the attack, when under artillery fire are exceedingly clearly and well put. The explanation of the artillery system of "ranging" requires a little modification in view of recent alterations in the system which introduce "collective" ranging, whereby range and fuze are found simultaneously.

The chapters on Outposts give very valuable hints, and provide an admirable elaboration of the application of the principles of Field Service Regulations and Infantry Training, the need for which has often been urged owing to the necessarily meagre nature of the instructions in those Manuals.

Allusion is made to the very common error of basing arrangements of an outpost position upon the locality occupied by the troops in bivouac, instead of upon the position they must occupy before they are ready to commence an engagement with the enemy. In fact a study of these chapters in conjunction with the Field Service Regulations will correct the common tendency to imagine that the line of resistance of the outposts will normally coincide with the position to be taken up by the main body in case of attack, this procedure being obviously the exception and not the rule.

Throughout the whole book, the spirit of the Field Service Regulations as regards the advantage of "Attack" as compared with "Defence" is impressed again and again, and this alone should, if carefully studied and taught, correct the tendency, which has not quite been eradicated from some minds, towards the pernicious "Belle Position Militaire" of a bygone age.

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**A Critical Study of German Tactics and of the new German Regulations.**—By Major de Pardieu. Published by Hugh Rees, Ltd. Price 5s.

Major Pardieu gives us an admirable précis of German Regulations, which, when read in conjunction with our own Field Service Regulations, cannot fail to be instructive.

The grammar and spelling of the American translation may appear strange in some places to English readers.

One cannot help feeling a certain amount of self-congratulation at the practical and broad-minded way in which our Regulations embody all the best principles of Tactics as enunciated by French and German tacticians, who must be, for a long time yet, the recognised authorities on Warfare on Land on a large scale.

The author appears, sometimes, to make too much of the assumption, which has been very common of late years, that the Germans are always going to adopt one form of tactics, namely, the uncompromising envelopment with all available forces in accordance with a preconceived plan. It would seem dangerous for a leader who may have to oppose a German force in the future, to assume

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The author appears, sometimes, to make too much of the assumption, which has been very common of late years, that the Germans are always going to adopt one form of tactics, namely, the uncompromising envelopment with all available forces in accordance with a preconceived plan. It would seem dangerous for a leader who may have to oppose a German force in the future, to assume

that his enemy will be sure to adopt these particular methods on all occasions.

Is it not probable that these ideas as to so-called differences between German and French theories originated in a forecast of the probable course of a campaign between those two nations, and are not necessarily representative of the tactics which their leaders would adopt in other circumstances? In his "Foreword" the author very rightly refers to the importance of taking full account of national characteristics and psychology; but his insistence on the innate lack of "Initiative" of the German soldier seems a little optimistic for a Frenchman, when one remembers which side exhibited this quality most in 1870. German officers, at least, do not seem to suffer from this defect.

Of course, as is pointed out, encouragement of "Initiative" is the underlying feature of German training and the special insistence on this may be required to counteract the defect of which the German character is accused.

The cautious defensive attitude attributed to the German advanced guard in Chapter VII is in curious contrast to their generally very offensive tactics.

In this, as in all modern military works, a great deal is written about the "offensive spirit," as if it was a novel and original key to success. But surely this is a self-evident fact which must have guided all commonsense training for war from all time. The cult of "*La Belle Position Militaire*," which has occasionally asserted itself due to misguided reliance on new firearms, has always proved its viciousness in due course.

Is not the true reason why the Germans, in 1870, displayed offensive spirit to such an extent that they were in a position to do so? Unless armies are well organised and prepared in peace time, they are not in a position to display offensive spirit, though the will to do so is probably there.

It all comes back to "peace preparation." Germany, which took the lead in systematic national preparation for war in the nineteenth century, has so developed her resources that she can, above all nations, make certain that she will be ready for war in Europe when it comes, and can therefore talk glibly about "offensive spirit."

Others, who are not so well prepared, must be content to reserve their offensive spirit until they can collect the means by which it can be properly undertaken.

American and British readers of this work have constantly to remind themselves that the writer is dealing with forces vastly superior to any which their nations have any chance of putting into the field under present organisations; the "Grouping of Cavalry Division," the vast assemblage of Army Corps, the ruthless advance to attack, regardless of losses, and the innumerable tasks of batteries, counter-batteries, etc., are empirical ideas which we, in our present rudimentary military existence, can only dream about,

though the underlying principles are equally adaptable to our more wieldy numbers, which, in a theatre of war where vast masses cannot be assembled, may be able to cope successfully with these conscript armies.

Details which would appear particularly useful for us to consider are the remarks on page 21, as to "Mixing up of units;" on page 101, as to "Maintenance of control by fire, unit commanders at close ranges;" on page 103, as to "Distance at which the assault should be delivered, and how artillery can support it;" and in Chapter VIII, The disposition of troops in the defence.

**Simple Tactical Schemes.**—By Captain R. S. Waters. Published by Hugh Rees, Ltd. Price 4s. 6d.

This book, as the author in his Preface points out, is primarily intended for officers of the Territorial Force and Colonial Forces, but should also be of assistance to junior officers of the Regular Forces. We might even go further and suggest that more senior officers would find the methods shown for tackling minor tactical problems a useful help in working for their Q(ii) examination, although the forces dealt with are not generally as large as they might be given in that examination. While recognising the author's laudable desire to place before officers in a combined form the principles, and hints as to their application, of the various Training Manuals and F. S. Regulations, it is doubtful whether it is advantageous thus to multiply publications of this kind, which are largely seized upon by officers, who rarely trouble to read the Regulations themselves, as a sort of short cut for passing examinations.

It would seem that it would have been better to have omitted all the preliminary notes to each chapter, the gist of which is much more clearly and concisely put in the Training Manuals and F. S. Regulations and merely to have referred in the problems to the paragraphs in the Regulations themselves.

The danger of an elaboration of the details of the Regulations by independent military authors is that it sometimes comes dangerously close to departure from the intention of those Regulations. In this book examples of this may be quoted as follows:—

On page 2: "Moral" is given as a *minor* factor, whereas in F. S. R. (I), sec. 99, it is indicated to be a *major* factor.

On page 109: the paragraph "Indirect fire by artillery may be considered especially suitable to the defence."

This is a most misleading, and, in fact, incorrect statement.

In the first place the term "indirect" is now practically only used for a method of "laying," which is the *normal* one, even in the open, *vide* F. A. T. (1912), sec. 117 (1). What the author apparently intends is that the "covered position" (formerly termed indirect), *vide* F. A. T., sec. 190 (8), is especially suitable for the defence. But there is nothing in the Regulations to



justify this statement. The defence has to deal far more with moving targets than has the attack, and for moving targets a covered position is most unsuitable, especially artillery, such as Territorial Artillery which has not a high degree of training.

All that Field Artillery Training says is that "The artillery should be concealed as much as possible." But fire effect comes before concealment, and, in the case of all except very highly trained batteries, this necessitates moving targets being visible from the gun positions themselves, and the occupation of a position either by the "open" or "semi-covered" positions, which can be "concealed as much as possible." The problems themselves are most clearly and logically worked out.

One or two mistakes occur occasionally, as for example :—

- (i) *Order No. 5 on page 18* : "1st Line Transport is put right in rear of the Field Ambulance, contrary to F. S. R. (I), sec. 12 (7), (Footnote to page 30), which makes it follow its unit.
  - (ii) Positions are frequently described by naming places from left to right instead of from right to left as recommended in F. S. R. (I), sec. 9 (vi).
- Examples* :—pp. 118, 129, 151 of the book.
- (iii) *Order No. 3 on page 154* : The indicating of a target in operation orders does not seem practical or sound. F. S. R. (I) and F. A. T. give quite enough general instructions as to what targets the artillery should engage and it should not be tied down by orders before the action commences to fire *only* on the enemy's infantry, at any rate not in this case.

The maps are clear, and situations well indicated thereon. Sketch Map No. 4 would have been clearer if the actual buildings had been distinguished by a wash of colour from the surrounding enclosures.

There are some misprints which, however, are too obvious to be misleading :—

W. for E. in line 9 from bottom of page 137.

Upper for Lower in line 15, page 167.

No point "A" on Sketch Map No. 1.

Low Farm for Low Farm in line 19, page 247.

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**"Stray Notes on Military Training and Khaki Warfare."**—By Field-Marshal Sir Charles H. Brownlow, G.C.B. Published by Thacker, Spink & Co., Calcutta.

This book consists of a series of articles written at various periods of the author's career. Sir Charles Brownlow landed in India in 1848 just before the outbreak of the last Sikh war, in which he took part, and he finished his active military career in command of the Rawalpindi Brigade in 1877 : his experiences in India were, therefore, those of a particularly interesting period of the history of

that country. As he was essentially a "frontier" soldier, it is not surprising that the most interesting of the articles are those which deal with frontier questions, such as "The Afghan War, 1877 to 1880," which is a fine piece of contemporary criticism, and "The Trans-Indus Pathans," which gives us an interesting account of the various tribes concerned, and which is well worth reading by those who wish to get an insight into the Pathan character. Throughout the book he is strongly opposed to the forward policy, and does not believe in peaceful penetration, though his pessimism as regards our policy in Chitral has not been justified in the event.

It is natural, considering his association with the 1st Sikhs and the 20th Punjab Infantry, that he should be filled with a tremendous admiration for the races from which those two regiments are recruited : at the same time, many will disagree with him in believing that these are the only races in India who can be considered to provide good soldiers.

The first few articles in the book have been written comparatively recently, and urge very strongly on the nation the desirability of national service in some form. To quote from the Preface, "They (the articles) were written chiefly with a view to possibilities in India. Many of these possibilities are manifest, but there are others which cannot be publicly discussed, and for which we are not prepared." In fact, Sir Charles Brownlow foresees the necessity of having to send considerable reinforcements from England to India.

The author is an officer who always had the interests of the sepoy at heart, and his article, "The Native Army of Bengal", puts very clearly the difficulties with which we have to contend in dealing with the native soldier, and what we have to look out for if we wish to keep him contented and loyal.

**Fredericksburg and Chancellorsville.**—By Colonel J. E. Gough, V.C., C.M.G. Published by Hugh Rees, Ltd. Price 6s. net.

This account of the Fredericksburg and Chancellorsville campaigns has been written chiefly from the Federal point of view. The author acknowledges in his preface that he has utilised, in its compilation, the lectures which he had delivered on these campaigns at the Staff College in 1912.

Considering the fact that a Staff College Professor is very much in the eye of the military public as an authority on military education, it is a great pity that the author did not pay more attention to the editing of his work : the style throughout is colloquial and in places we even find slang expressions, which would lead one to suppose that the notes which he had made for his lectures have been reproduced as they were originally written. This is all the more to be deplored as the subject matter is really

excellent and shows that considerable trouble has been expended in the collection of the data from which the lectures were written. For instance, in order to get his local colour correct, the author has made several references to officers of the War College at Washington. Again, the maps are both numerous and clear, and facilitate the following of the text to a degree not often found in British military publications. It is a pity, however, that the scales were not reproduced on each map: this error has been rectified to a certain though not very satisfactory extent by the inclusion of a slip in the fly-leaf giving the scales of the various maps.

There is nothing particularly new in the description of these campaigns which Colonel Gough gives us; but the outstanding feature of the book is the criticism. In his preface he claims to study the various problems as they presented themselves to Burnside, Hooker and others *at the time*. This is of course the true way to study war. With a full knowledge of what actually happened, it is difficult if not absolutely impossible to place one self in the position of the man whose actions we are investigating. One cannot help feeling at times that Colonel Gough has not completely dissociated his mind from what was the actual result of any particular plan, when he criticises the maker of it. He himself points out the various difficulties under which the Federal leaders laboured, ranging from vicious interference on the part of the civil head of the State and political intrigue, to disloyal subordinate commanders and an undisciplined and untrained army. These very disabilities and the disastrous consequences arising out of them are well brought out in the book, and it is not surprising to find stress laid upon them by General Henry Wilson in his introduction to the book. Still it is difficult to realise fifty years later the precise frame of mind in which Burnside or Hooker attempted to solve the military problems which faced them during these two campaigns, and in criticising, we should try and make allowances for their difficulties.

Be that as it may, the criticisms give us much food for thought and the lessons which Colonel Gough has deduced may well be laid to heart, not only by soldiers, but also by civilians who find themselves in responsible positions in the Government. It has ever been a trait in the Anglo-Saxon character to imagine that it does not require an expert to lead men in war, and that any man armed with a rifle *ipso facto* becomes a soldier. Were it not of such common acceptance, it would hardly be worth while to refer to this fallacy: and we have to thank Colonel Gough for speaking so plainly and for proving from actual events that, however great a risk of defeat a nation may run by relying upon amateur soldiers and leaders, those risks will turn into a certainty of failure once the civilian heads of State interfere and attempt to dictate the strategy and tactics to be employed by the commander in the field.

**The Campaign in Thrace, 1912.**—By Major P. Howell, *p.s.c.*, 4th Hussars. Hugh Rees, Ltd. Price 4s. net.

The book is in the form of six Lectures, delivered at the Staff College, Camberley; it is of a convenient length, well written and easy to follow; the maps also are good and clear. The author knew Bulgaria before the war, and was present with the Bulgarian Headquarters during the fighting in Thrace. He starts by quoting Bismarck's saying that "he always contrived to gain his experience at the expense of others," and then goes on to teach us, how we may profit from the experiences of the Bulgarians and Turks.

This he does by showing us a series of Problems, as they must have presented themselves to the minds of the Bulgarian Leaders and how they were solved. Undoubtedly this system is the one which leaves the most lasting impression on one's mind when studying Military History.

In addition to the Problems there is much to be learned from the book. The Bulgarian system of command and training, the formation of their General Staff and their tactical handling is clearly described and commented on.

The book is of particular interest and value to cavalry officers, from the very clear and concise account it contains of the cavalry and their work, and the comparisons which the author draws between the Bulgarian and British cavalry.

As a whole, the book has the same fault which is common to all so far seen about this war. It is written too much from the partisan standpoint and the author draws his conclusions on too narrow lines from just the short 10 days' fighting that he saw. In consequence a good many of these conclusions have been proved false by subsequent events. He describes the Bulgarian strategy as being half-hearted (p. 14). On the contrary, one of the most important lessons we have to learn from this war is the way in which the Bulgarians left the protection of Sofia to their own bold offensive strategy. They had evidently learned their lesson from the American Civil War and did not repeat Lincoln's mistake over Washington. On p. 78 and again on pp. 126 *et seq.*, the author makes various excuses for the Bulgarians not following up their victories of Kirk Kilisse and Lule Burgas. This is unsound teaching; surely no excuse is possible for these flagrant breaches of the great maxim of the greatest of all great Captains—No victory is worth counting as such unless it is pushed home with the very last man and horse so that the enemy may be annihilated.

The author, undoubtedly, does not emphasise enough the chances that the Bulgarians missed by not having a large force of cavalry and horse artillery.

These were certainly the greatest mistakes that the Bulgarians made and cost them very dear in the long run.



## NOTICES OF BOOKS.

**Musketry Lectures.**—By Captain H. Clutterbuck, The King's Own Regiment. (Hugh Rees.) Price with diagrams, Price 5s.

This book is intended for Officers of the Auxiliary Forces and consists of a series of six lectures delivered while the writer was a Volunteer Adjutant in India. It is accompanied by large diagrams suitable to illustrate lectures.

It may be questioned whether there is any necessity for such a book, as all it deals with is fully described in the Musketry Regulations, and unofficial publications in explanation are not recommended.

**Questions on the Campaign in Virginia from April 1861 to May 1865.**—By Lieut.-Col. H. M. E. Brunker. (Forster, Groom & Co.) Price 1s 6d.

This is a cram-book pure and simple. It contains 105 questions and indicates in some cases where the answer may be found. It also contains a chronological summary of events and a map. This class of publication may be useful for reference, but it can never teach military history.

**"Notes on Billetting for Cavalry,"** by Lieut.-Colonel W. H. Greenly, D.S.O., 19th Royal Hussars, London: Hugh Rees, Ltd., 5 Regent Street, S. W 1913. Price—one shilling.

An admirable little pamphlet recently published in the *Army Review*. It is only within the last two or three years that the ignorance of the British army on the subject of billeting has begun to disappear.

Lieut.-Colonel Greenly says his remarks do not apply to India. This should not deter officers from reading the clear explanation and advantages of billeting, not only from the point of view of shelter, but also from that of tactics. It may well be found that the opportunities of making use of billets in this country are not so few as is supposed, nor are the climatic conditions so favourable to bivouacking as is generally held.

**"Three Days at Delhi,"** by Major H. A. Newell, Indian Army. A complete guide with Map. Printed by Higginbothams, Ltd., Madras and Bangalore. Price—8 annas.

**"Three Days at Agra,"** by Major H. A. Newell, Indian Army. A complete guide, which includes Fatehpur-Sikri, and map. Printed by Higginbothams, Ltd., Madras and Bangalore. Price—8 annas.

Major Newell places his sight-seeing experiences at the disposal of others in some handy little pamphlets which combine a short cut

to what to see, with a brief history of why they are worth seeing. His two latest publications show what can be done in three days at Delhi and at Agra.

**"Organisation of the French and German Armies, 1870, at a Glance,"** by Major T. E. Madden. Price—1 rupee.

This compilation will be useful for reference to those studying the campaign as it shows on two sheets the corps, commanders, and strength of each army.

**The Year Book of Wireless Telegraphy and Telephony, 1913.** London: The St. Catherine Press. Price 2s. 6d.

This is the first publication of its kind and will prove a valuable book of reference on all matters connected with the subject. It is compiled and edited by the Marconi Company and naturally gives prominence to the interests of that Company. There is a complete list of wireless stations on shore and of ships fitted with wireless installations and an excellent map of the world showing stations clearly without any unnecessary detail.

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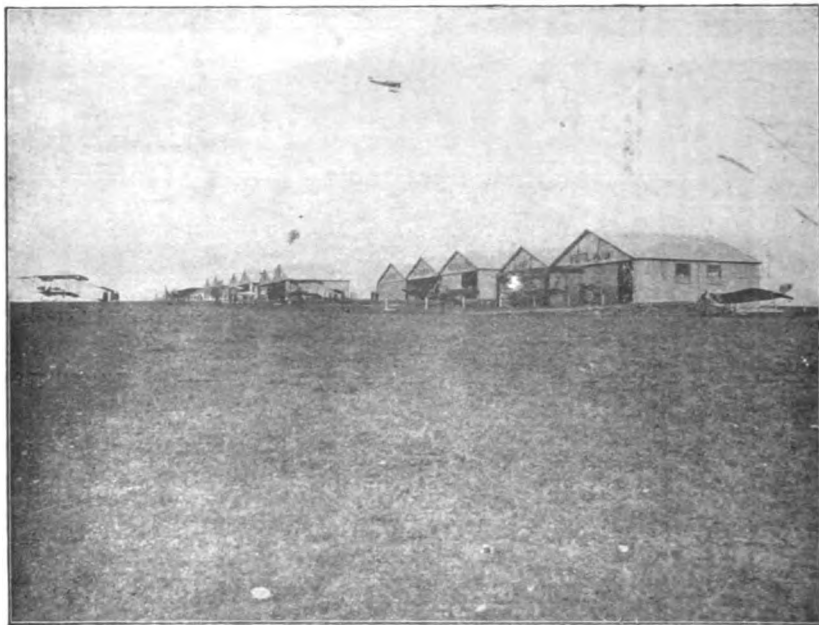
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